CATALOGING AND STANDARDIZATION UNDER PUBLIC LAW 436–82D CONGRESS

UNIVERSITY OF MICHIGAN
JAN 14 1959
MAIN READING ROOM

HEARING

BEFORE THE

SUBCOMMITTEE FOR SPECIAL INVESTIGATIONS

OF THE

COMMITTEE ON ARMED SERVICES
HOUSE OF REPRESENTATIVES

EIGHTY-FIFTH CONGRESS

SECOND SESSION

UNDER THE AUTHORITY OF

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CATALOGING AND STANDARDIZATION UNDER PUBLIC LAW 436, 82D CONGRESS

FRIDAY, DECEMBER 5, 1958

HOUSE OF REPRESENTATIVES,
COMMITTEE ON ARMED SERVICES,
SUBCOMMITTEE ON SPECIAL INVESTIGATIONS,
Washington, D. C.

The subcommittee met at 10 a. m., Hon. F. Edward Hébert, chairman of the subcommittee, presiding.

Mr. HÉBERT. The committee will be in order.

The Chair desires to make the following statement:

In 1952 we passed through this subcommittee and there was enacted into law, Public Law 436 of the 82d Congress. It set up and required the establishment of a final cataloging system, and it directed that standardization be accomplished on military items. Among other things, it was required that the Secretaries of the departments report to the Committee on Armed Services on January 31 and July 31 of each year, the progress made in cataloging and on standardization. These reports have been promptly made. The subcommittee has followed with interest the progress and development of the single catalog, but, with greater interest, the standardization program which has followed along with it.

Earlier this year we addressed a number of inquiries to the Department of Defense on certain specific items. One of the things that was ascertained in the inquiry was that of the cataloging system established by Public Law 436. The tools for ascertaining the answers were present and were in use, so that inquiries which are now made about specific items of merchandise or Government wares can be readily identified and prompt answers given.

The standardization program is now underway. The extent of its development is a matter of interest and concern to the subcommittee and the speed with which it is set in motion is likewise of interest and concern to the subcommittee.

The answers to the specific questions which were addressed earlier in the year to the Department of Defense have been prepared and they have opened up an interesting subject and shown an important development which was anticipated when Public Law 436 was passed.

Section 2455 of title 10, United States Code, requires the semiannual reporting. What you will hear this morning is an amplification of the most recent report of the Department of Defense.

We have with us Hon. E. Perkins McGuire, Assistant Secretary of Defense for Supply and Logistics, and his staff. They will give answers to the questions of the subcommittee and give you a visual demonstration of activities in this general field.

Secretary McGuire. Thank you, Mr. Chairman.

Mr. Courtney. Now, the Secretary has a prepared statement.

Secretary McGuire. Mr. Chairman and members of your committee, it is a pleasure for us to be here and to have the opportunity to review with you our progress in the field of cataloging and standardization. I am keenly aware of your contributions in these fields both through the enactment of Public Law 436 and through your continuing interest. I appreciate very much your continuing interest which, together with studies by your staff, often bring into sharp focus problem areas in which special effort should be concentrated.

I personally feel that we have accomplished a great deal under both the cataloging and standardization programs. I would hasten to add, however, that there are still problems to be solved and room for improvement in both fields. We hope to cover some of the improvements that have been made as well as others which are now being implemented. In view of the present rate of technological development and improvements in management techniques, it is safe to predict that the future holds even more significant improvements than we have witnessed in the past in this field.

In the area of cataloging, we have completed the initial phase of item identification and are now identifying new items as they enter the system. Conversion, which involves one of the largest single record changing operations ever undertaken in the Department of Defense, is nearing completion. Our target date is December 31 of this year, and I expect that this target will be met for practical purposes.

We have installed an automatic data processing system into our cataloging operations and are using rapid data transmission to accelerate the flow of catalog information. In brief, we have geared the total cataloging operation to meet the needs dictated by modern supply management.

In standardization also our progress has been gratifying and we are able to report marked achievements in many commodity areas.

Standardization assignments to the three departments, the development of detailed plans, the establishment of work projects, and the production of specifications and standards is proceeding satisfactorily. The shortage of engineering talent continues to be a problem. However, we are now more fully utilizing our engineering resources by isolating and separately programing those functions in the standardization process which do not require engineering talent.

I consider both our cataloging and standardization programs fundamentally important prerequisites to establishing major improvements within and between the military departments in the field of supply management, and both programs continue to receive priority consideration.

I have with me members of my staff who will discuss these programs. Mr. Ritter will discuss the overall programs, and Mr. Dunn will explain several exhibits which illustrate some of the major accomplishments we have achieved.

With your permission, I would like to present Mr. George Ritter, Director of the Utilization of Catalog and Standardization Division, who will present further details regarding these programs which I feel will be of interest to your committee.

I would like again to acknowledge the value of your interest and your support of these programs over the past several years. I hope to have the opportunity to continue this close relationship with your committee.

I might say, Mr. Chairman, that we have tried to set up this information for you in some visual displays of specific things we are doing and results we have achieved and, of course, we are prepared to answer any detailed questions the members of your committee would care to ask.

Mr. HÉBERT. You present it in your own fashion.

Secretary MCGUIRE. Fine. Thank you, sir.

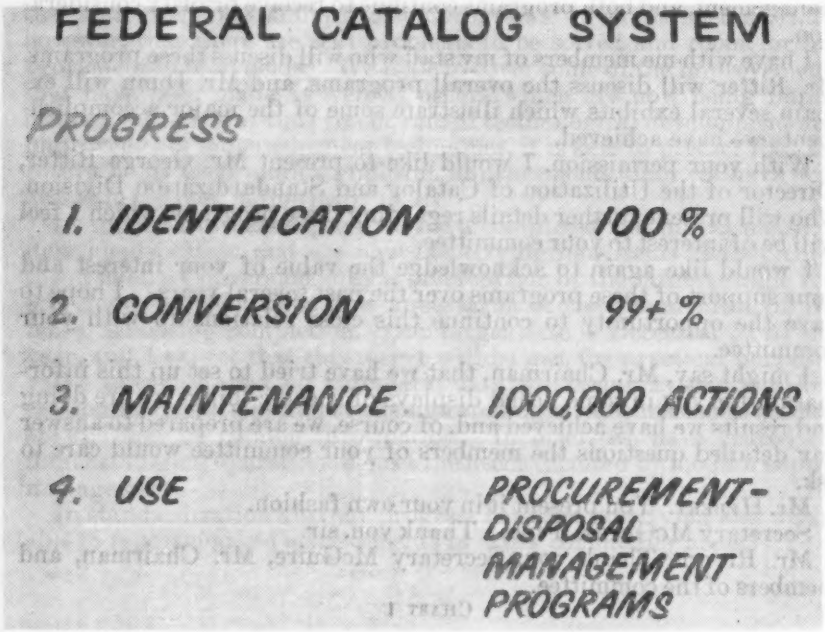
Mr. RITTER. Thank you, Secretary McGuire, Mr. Chairman, and members of the committee.

CHART 1

I would like to talk to you this morning about some of the improvement we have made in our standardization program and how those improvements will contribute toward the reduction of the items in our supply systems at a more rapid rate.

Because your committee is well familiar with the close relationship of cataloging and standardization, both of which play a very important role in our item-reduction program, I would like to give you a quick rundown on the progress of the cataloging program as well as that of standardization.

CHART 2



As Mr. McGuire has indicated, we have completed the identification of all the items currently in our supply system. Our services are substantially through the conversion or the changeover from the identifications they formerly used to those developed under our new system. We are maintaining the system now on a current basis. We are adding new items that enter our systems through procurement. We are consolidating overlapping items we discover. We are dropping items that are no longer of supply interest. And we are correcting the errors we find. These actions total about 1 million a year.

In order to accomplish this we have applied automatic data processing and rapid transmission facilities to about 65 percent of these actions. This has enabled us to give the military services prompt service. That is, we have reduced the time required to get a stock number from about 4 weeks to 3 to 5 days where we process the data automatically.

The system and the single identification language prescribed by Public Law 436 is now being used in the functions of supply from

procurement through disposal. The data we have recorded in the catalog system and the facilities are now being used actively in our management programs.

Mr. BATES. Do I understand that in identification, you have had a complete inventory of everything in your stock system?

Mr. RITTER. We have examined each item we have and have assigned Federal stock numbers to each different item. Now, that does not involve the taking of physical inventories of quantities. That is not a part of the cataloging program.

Mr. BATES. I understand.

Mr. RITTER. But we have the tool to do that.

Mr. BATES. But you have identified everything?

Mr. RITTER. Yes, sir.

Mr. BATES. Active and inactive stocks?

Mr. RITTER. Everything; yes, sir.

Mr. BATES. Including surplus?

Mr. RITTER. Everything that is managed in our systems?

Mr. BATES. That takes in electronics and everything?

Mr. RITTER. All categories of items; yes, sir.

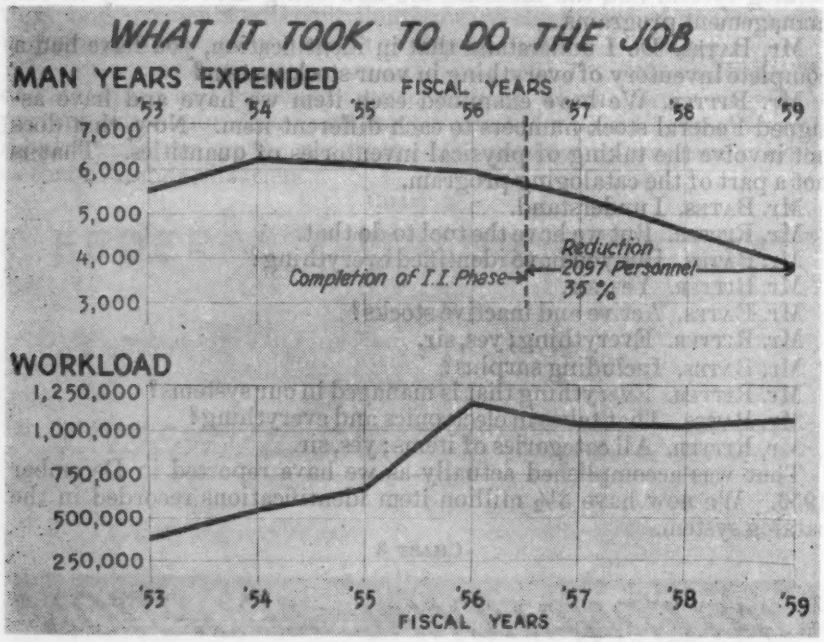
That was accomplished actually as we have reported in December 1956. We now have 3½ million item identifications recorded in the catalog system.

CHART 3

We would like to "toot our own horn" here. We thought we had a pretty good catalog system, and we feel that this was further confirmed last year when the NATO member countries, after a very extensive survey of catalog systems in use in governments and industry, adopted our system. And our system is being installed now in the NATO countries.

Australia has likewise adopted it, and is now installing it in their Air Force first.

CHART 4



Here is what it took us to do the cataloging job. We started back here at the passage of Public Law 436 with 5,500 people throughout the services; that is, in the small central organization as well as in all departmental activities. We built up to a peak of 6,200 in 1954. We maintained a relatively comparable level through the initial item identification period; that is, until we had identified the things we already had in our system, at which time we had 5,900. We then dropped to 3,800 people, for a reduction of 2,100, or 35 percent below our complement at the time when we finished our initial identification job.

Thus, we are maintaining the system now with around a 4,000 man-year level.

Our workload started at the same time with 380,000 actions. It went up to 1.1 million at the time we were finishing our initial identification work. It has now leveled off at approximately 1 million actions per year.

This demonstrates the big workload involved to keep this catalog system actually current and effective for use in our management operations.

Mr. BATES. Now, are these just special people assigned for this prospect, or does it also include others who might be working at a lower level who have other functions but who contribute to this?

Mr. RITTER. These people are people working exclusively on the cataloging operations in the departments.

Now, it might be of interest to note that we are below the level we were at the time Public Law 436 was passed—5,500 down to 3,800, for maintenance of this system.

Mr. CUNNINGHAM. May I ask a question there?

Mr. RITTER. Yes, sir.

Mr. CUNNINGHAM. Then, as a result of getting the single catalog, you have been able to reduce the number of personnel working on this procurement against what it was prior to Public Law 436?

Mr. RITTER. Working on the cataloging operation itself; yes.

Mr. CUNNINGHAM. Well, my point is: This did not require the employment of 3,000 additional people that will be permanent?

Mr. RITTER. No, sir. This is the total number of people presently employed in cataloging, in all of our services as well as in our central operation.

Mr. CUNNINGHAM. Back as far as 1953 the total number was about 5,500.

Mr. RITTER. Yes, sir.

Mr. BATES. But this was in progress before 1953 in many departments?

Mr. RITTER. Yes; that is right.

Mr. BATES. It wasn't the public law that initiated this. This has been in effect really for many years.

Mr. RITTER. That is right. Cataloging was performed independently in the military services and with limited coordinated effort before Public Law 436.

Secretary MCGUIRE. Mr. Chairman, as I recall the background of the enactment of this public law, it put this program in sharp focus, I believe, and put a great emphasis upon it. I just wanted to point that out.

Mr. RITTER. Yes, sir.

Mr. HÉBERT. I am glad the Secretary mentioned that, because prior to the passage of Public 436, which came out of this particular subcommittee, we had a lot of conversation and no action.

Mr. CUNNINGHAM. A resolution was passed in 1946, wasn't it?

Mr. HÉBERT. 1946 or 1948.

Mr. BATES. The first resolution passed 25 years prior to 1952.

Mr. COURTNEY. Yes; 25 years, and nothing substantial was done until Public Law 436 was passed. It brought, as the Secretary said, this into sharp focus, and progress has been made since that time.

Mr. BATES. Yes. I just wanted to account for the fact that when Public Law 436 was passed you had 5,500 people presently working on cataloging.

Mr. RITTER. That is right.

Mr. HÉBERT. After the public law was passed, they had 3,800 people.

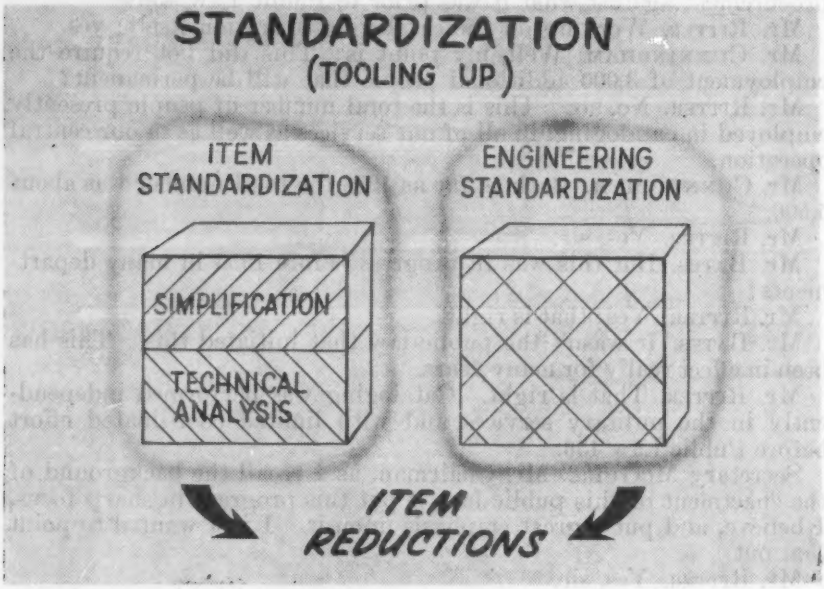
Secretary MCGUIRE. I would like to make one other observation.

Mr. HÉBERT. Mr. Secretary.

Secretary MCGUIRE. These are people who are directly concerned with the mechanics of cataloging and that type of thing; that is, item identification. And I think it is fair to state that there are other areas where the people who are working in a stockroom, for example, realize savings there, or let's say in the ease of handling supply papers, the pieces of paper that are handled back and forth. Once it gets its momentum, the savings are not identifiable, but there is some measure, I am sure, there.

Mr. RITTER. Gentlemen, the cataloging system is now in operation and is working. This is all I had planned to say about it at this time.

CHART 5



I would like to go, then, to our standardization program, for which, like our cataloging program, we had to tool up. We had to find out just how we were going to do the job and then develop the rules and procedures.

Mr. HÉBERT. Standardization grew out of the cataloging. It was the second step or second phase.

Mr. RITTER. Yes, sir; very closely related. Now, in our standardization program we perform two kinds of standardization. That is, item standardization and engineering standardization. We have sliced our item standardization job into two pieces. The first is simplification. The other is technical analysis.

In our simplification we examine all of the items we have in our supply system, such as these screws here. We select those that actually are required for our needs. The others we label as no longer to be procured, issue until exhausted, or if they are actually——

Mr. HÉBERT. What is this exhibiton you have here? Screws?

Mr. RITTER. These are screws; yes, sir. They represent a number of reductions from 14 types to 4 that are actually required in our systems.

Mr. HÉBERT. And the others have been eliminated?

Mr. RITTER. The others have been labeled for elimination. As you well realize, we want to use them up economically. We will use them as long as we have a supply need for them, and those for which we no longer have a need we will dispose of.

I want to apologize to Mr. Dunn for using his display here to illustrate that point.

Now, picking up where we leave off with simplification, I might say that this gives us a quick way of reducing items and is a very profitable operation.

In our technical analysis we examine the functions of the items we have left from simplification or the functions of items which have not been even subjected to simplification, and we either redesign something we already have or design a new item to incorporate as many of the characteristics of the existing items as we can. This provides for fewer items to meet our future requirements.

So through this we are reducing the present items and setting the pattern for a reduction in the items required to meet our needs in the future.

Mr. BATES. What is the difference in two crossed-recessed head screws in the display? Is one a Phillips head screw?

Mr. RITTER. They are both cross-recessed heads. One is a flat and the other is a tapered round head.

Mr. BATES. Now, these two here—on this side—one is a Phillips for a screwdriver?

Mr. DUNN. There is a Phillips and a slotted head in two different styles. I mean a cross-recessed head.

Mr. BATES. Yes.

Mr. DUNN. In two head styles. This is a pan head. This is a flat, 82° or 100°, I have forgotten which.

Mr. BATES. Yes.

Mr. DUNN. This is a pan head and a flat. The configuration—there are 2 different configurations and 2 different slots.

Mr. BATES. What are you going to do—are you going to continue both of that type there?

Mr. DUNN. Both of which type now?

Mr. BATES. One with the Phillips and one with the straight slot?

Mr. DUNN. Yes, indeed. There are requirements for both. The type of slot—each has advantages in given applications. There are requirements for both of these types of slots.

Mr. BATES. What are the differences? I know every time I want a screw driver for one thing, I get the wrong thing.

Mr. DUNN. Yes. Well, this is one of the reasons why, for example, we don't have two different cross-recessed head slots. We have reduced from two, which are commercially available, to a single cross-recessed head slot for that very reason. We only need one cross-recessed-head screwdriver.

I can't tell you in technical terms the precise reasons why in certain applications a cross-recessed head is preferable to a slotted head, but there are engineering, sound engineering reasons why this is so.

Mr. MILNE. The basic reason for it is the Phillips head can be driven with a mechanical driver without danger of it slipping off and marring the surface. This, of course, is one of the advantages.

Mr. BATES. You can use it with a regular Phillips screwdriver too?

Mr. DUNN. That is right.

Mr. BATES. So I don't see why we shouldn't even get down to one or the other.

Mr. DUNN. What Mr. Milne said was that if you use a slotted screwdriver, it is apt to slip off the side, while you are applying the force——

Mr. BATES. I understand what he said.

Mr. DUNN. Yes.

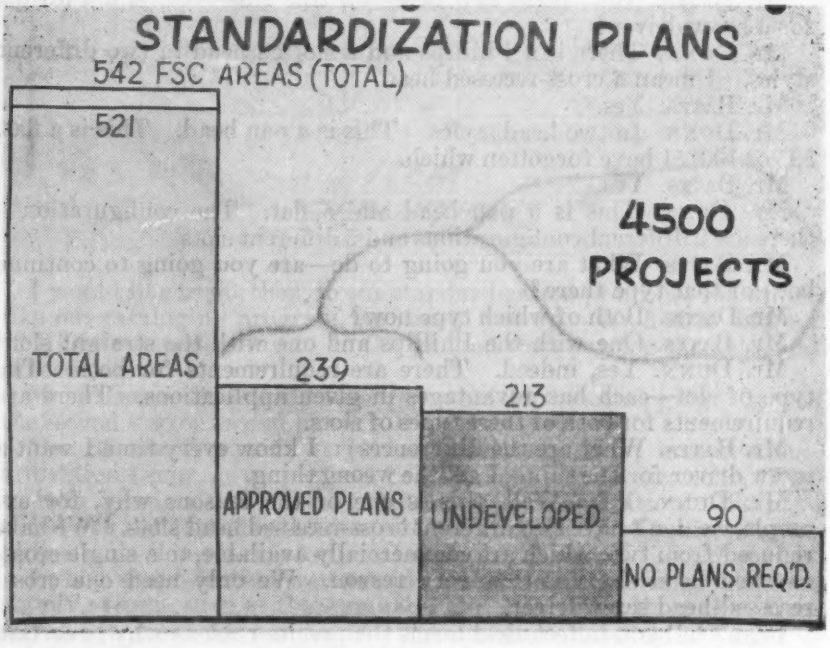
Mr. BATES. But I still don't understand why we can't own one or the other.

Mr. DUNN. I will be glad to give you a note explaining why, Mr. Congressman.

Mr. BATES. Fine.

Mr. RITTER. I might say that we are reviewing our requirements with that in view. That leads us into our engineering type of standardization, where we actually set up criteria for interchangeability. We establish basic characteristics of equipment and items to point the way and delimit the area for future design. Through both of these we contribute toward the eventual reduction to the minimum number of items we have to carry in our system.

CHART 6



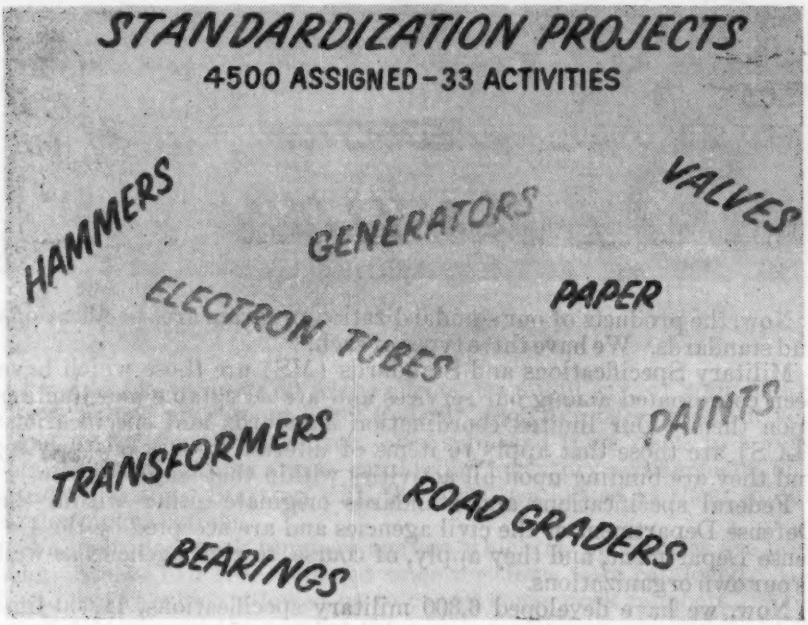
Now, standardization—in our original concept, we considered that all areas of standardization required engineering and technical people to do the job. We went to the source of those people; that is, to our services. We assigned the responsibility to them to perform standardization.

We used the Federal supply classification classes developed in the catalog system to define the areas for assignment.

Now, of the 542 classes, we have assigned 521 to the services. Within these, approved plans for the standardization of all items in the area have been completed in 239 of the classes.

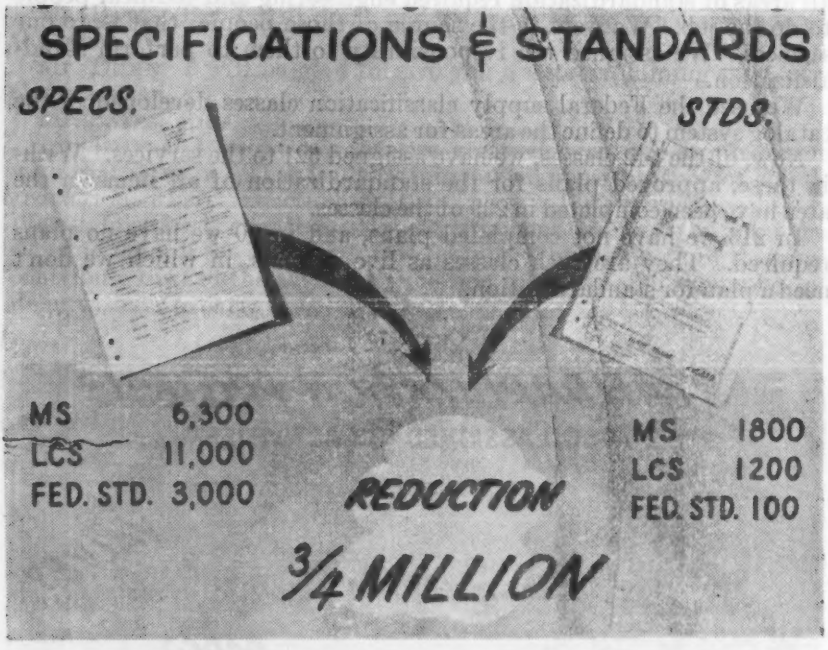
In 213 we have not completed plans, and in 90 we have no plans required. They are such classes as live animals, in which we don't need a plan for standardization.

CHART 7



Within the areas we have assigned, there are 4,500 active projects now in process. They are assigned to 33 activities. They include responsibility for both simple and complex items—paper and electron tubes, hammers, road graders, generators, paint, transformers, antifriction bearings.

CHART 8



Now, the products of our standardization program are specifications and standards. We have three types of each.

Military Specifications and Standards (MS) are those which have been coordinated among our services and are acceptable and binding upon them. Our limited coordination standards and specifications (LCS) are those that apply to items of interest to only one service, and they are binding upon all activities within that single service.

Federal specifications and standards originate either within the Defense Department or the civil agencies and are accepted by the Defense Department, and they apply, of course, to civil agencies as well as our own organizations.

Now, we have developed 6,300 military specifications, 11,000 limited coordination specifications, and 3,000 specifications which have become Federal specifications by the acceptance of civil agencies.

We have published 1,800 military standards, 1,200 limited coordination standards, and have developed 100 Federal standards.

Mr. BATES. What are those limited coordination standards?

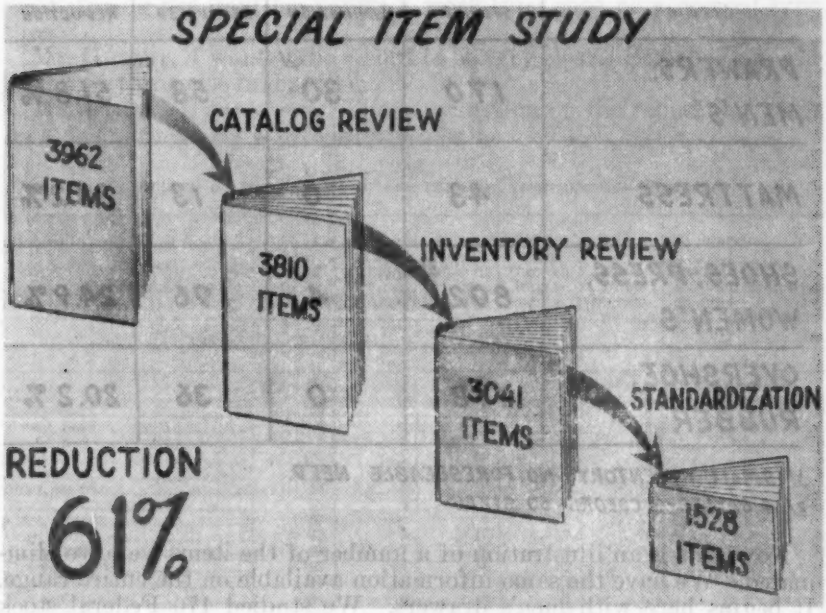
Mr. RITTER. They are the standards that apply to items of interest to only one service.

Now, that is the first step in the development of a military standard or specification, we might say. As the interests of other services develop, the limited coordination standards and specifications progress on into military standards and specifications. Generally, most of our military standards and specifications start out as limited coordination standards and specifications.

Now, in the process to date, we have actually earmarked for reduction in our system three-quarters of a million items through these standardization processes.

Now, I don't want to mislead you. These are not all out of our systems yet. As we indicated earlier, we want to use these up economically and only dispose of those for which we actually have no further requirements.

CHART 9



I would like to move on to the effects, we might say, of your inquiries to us last year about 3,962 Federal stock numbers on which you asked us for some information. We subjected these items to a very detailed study in three areas—cataloging, inventory management, and standardization. Starting with the 3,962, we looked at them in our cataloging operations.

We identified stock numbers against which no inventories are now held. Stocks had been depleted since the items were cataloged. We found errors which allowed us to cancel some stock numbers. As a result, we reduced the number through a cataloging review by 152 to 3,810.

We then examined the inventory position of these 3,810, and we isolated 769 of those as no longer being required for our needs, bringing the total down to 3,041.

Then, by strictly applying the standards we had and completing the development of standards for the remaining items, we have reached the point now where this total quantity of 3,962 can eventually be reduced to 1,528 when we have purged from our systems, that is, used up, the items that we selected as no longer required.

That gave us a 61-percent reduction.

CHART 10

EXAMPLES OF ITEM REDUCTIONS

ITEM	TOTAL NUMBER STUDIED	IMMEDIATE ELIMINATION	ISSUE UNTIL EXHAUSTED	TOTAL % REDUCTION
DRAWERS, MEN'S	170	30 1/	58	51.8%
MATTRESS	43	0	13	30.2%
SHOES, DRESS, WOMEN'S	802 2/	4	196	24.9%
OVERSHOE, RUBBER	178	0	36	20.2%

1/ SMALL INVENTORY - NO FORESEEABLE NEED.
2/ 4 STYLES - 3 COLORS - 50 SIZES

Now, this is an illustration of a number of the items we have eliminated. We have the same information available on the entire range. It begins here with men's drawers. We studied 170 Federal stock numbers. I will say this represented several types, with a range of sizes within each type. The same is true with the other statistics shown here of the items we examined.

Of the 170 drawers, we eliminated 30 immediately because we had small inventories and no foreseeable need—we labeled 58 more to be issued until exhausted. That gave us an eventual reduction of 51.8 perecnt.

In mattresses, we had 43. We found we couldn't eliminate any immediately but we could eventually discontinue 13 for a reduction of 30.2 percent.

In women's dress shoes, 4 styles, 3 colors, and 50 sizes, 802 stock numbers represented those items. We could drop 4, discontinue for future use 196, for a 24.9-percent reduction.

In overshoes, 178, none could be reduced immediately and 36 could be discontinued for future, for a 20.2-percent reduction.

Mr. HÉBERT. Before you leave that chart, women's dress shoes; I think the record should have that explained.

Mr. RITTER. All right. In women's dress shoes we had 802 items represented——

Mr. HÉBERT. The point I want to make—these are for Waves and Wacs?

Mr. RITTER. That is right, sir.

Mr. HÉBERT. This is not for fancy-dress ball.

Mr. RITTER. These were working shoes for our women in our armed services.

Mr. HÉBERT. In the service?

Mr. RITTER. Yes, sir; in our armed services.

Secretary MCGUIRE. Mr. Chairman, the technical definition that is also used in the retail trade; a dress shoe is a shoe that you or I would wear during the daytime versus a work-type shoe or a combat-type shoe.

Mr. HÉBERT. I wanted the record to be very clear. Somebody might read something else in that item.

Mr. RITTER. Thank you. The information on the remaining items included in the study is provided in tabular form.

Summary of the results of the selected item study—Phase I

Noun name	Total Federal stock numbers in study	Immediate stock number eliminations	Items identified as no longer required (issue until exhausted)	Eliminations through implementation of standards	Total item requirement	Number of inventory management changes as result of study	Number of standardization changes as result of study
Mattress, bed	54	6	13	6	29	13	1
Bedspread	13	1	2	7	3	1	2
Towel, bath	9	0	1	4	4	4	3
Towel, hand	9	1	1	3	4	2	3
Blanket, bed	24	1	10	6	7	3	8
Pillowcase	10	2	0	5	3	2	4
Shirt, woman	53	0	36	[1] (31)	48	0	0
Shorts, women	69	0	0	0	69	0	42
Skirt, woman	67	0	0	0	67	0	33
Cap, field, man	42	0	17	7	18	0	32
Shorts, men	92	2	0	0	90	0	90
Drawers, men's	192	34	58	32	68	32	49
Robe, dressing	10	2	0	[1] (2)	10	3	0
Women's undies	34	0	0	21	13	8	12
Boot, fireman	38	0	11	0	27	26	0
Overshoe, rubber	182	4	36	45	97	53	17
Shoe, dress, man's	2,297	212	308	1,439	338	752	0
Shoe, dress, woman's	1,206	4	300	638	264	290	0
Shoe, gym	124	13	17	20	74	34	0
Handerchief, man	4	0	0	1	3	1	0
Socks, men	62	27	7	[1] (19)	47	45	0
Gloves, cloth, man	37	16	0	2	19	13	0
Gloves, cloth, woman	56	5	12	0	39	0	0
Handbag, woman's	9	2	1	1	5	3	0
Women's clothing assembly	63	13	4	[1] (1)	47	26	5
Stockings, women	117	13	33	2	69	33	28
Belt, coat, man	34	17	0	0	17	0	0
Pillow, bed	13	1	2	7	3	7	2
Sheet, bed	19	4	1	8	6	1	3
Coat, man's pajamas	6	0	0	0	6	0	0
Trousers, men, pajamas	6	0	0	0	6	0	0
Blades, razor	6	1	0	3	2	0	0
Ballpoint pen	11	0	0	6	5	0	0
Napkin, table	8	1	0	6	1	0	5
Paper, toilet	9	0	0	7	2	0	1
Matches, box and safety	11	1	0	6	4	0	0
Dispenser, tape	27	3	1	12	11	0	0
Basket, wastepaper	16	1	2	10	3	0	5
Total	5,039	387	873	2,251	1,528	1,354	345

[1] Addition of new items to system as result of standardization.

Now, this inquiry which you made revealed to us some problems that we didn't know we had, and it gave impetus to the solution of a few we knew we had before. I assure you it gave a great deal of impetus to our efforts to solve the problems.

Mr. HÉBERT. You keep saying that, and so does the Secretary. Do you mean to say this is a needling committee, that we are needling you a little bit?

Mr. RITTER. No. That is factual.

Mr. HÉBERT. You say we needled you and we got action.

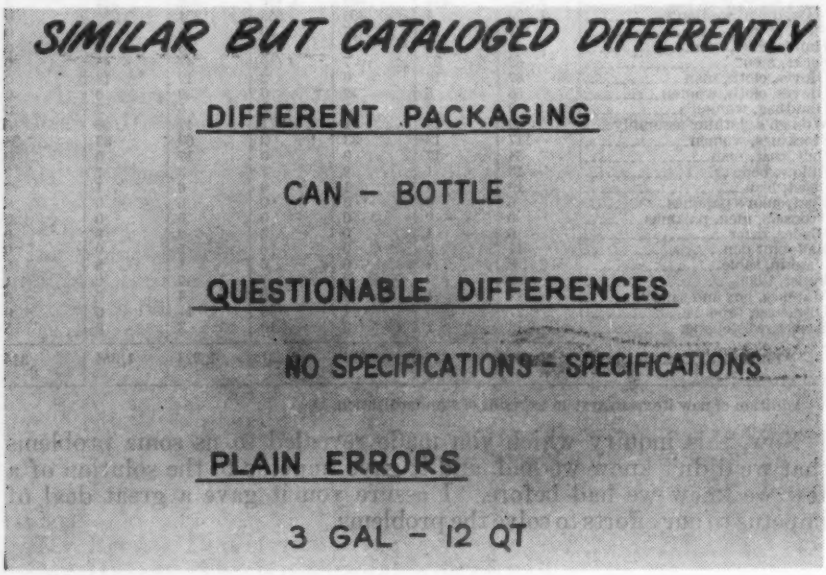
Mr. RITTER. You needled us, and you got action, I want you to know. You surely did.

CHART 11

I would like to enumerate some of these problems and tell you what we plan to do about them, and what we have been doing about some of them.

Now, heretofore, before we had the catalog system completed, we didn't have a lot of information in the form available for quick answers. We do have that information now. We are employing it to help us solve our problems.

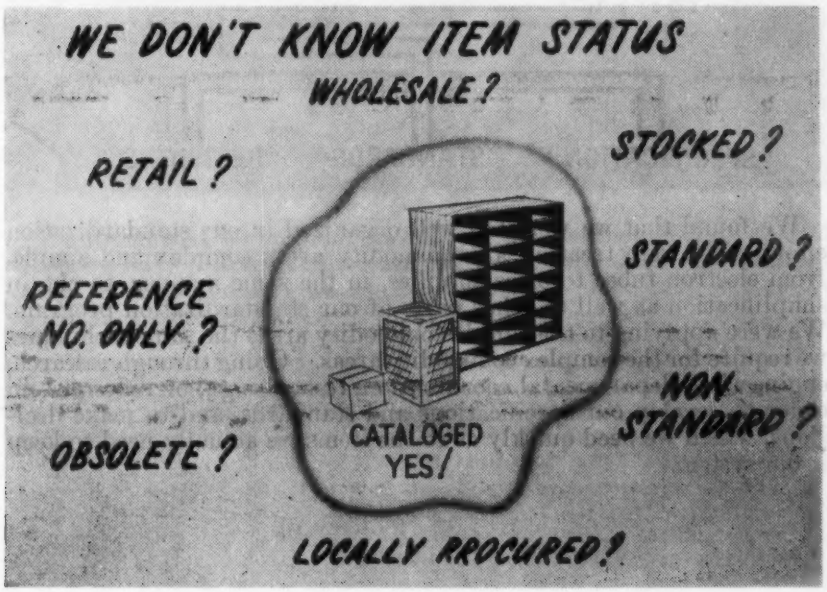
CHART 12



I would like to enumerate a few here, and show you what we are doing about them. Now, the fact that we have cataloged all of our items—we have found that we have identified a lot of similar items differently. For instance, we have carbon tetrachloride, manufactured under the specification in a bottle and in a can. Now, maybe that is legitimate or not, but we must look at it to see. We have items described in the same manner in which we have a specification referenced to one and no specification to another. We just plain goofed in some instances. We found an example where we had assigned 2 stock numbers to a gasoline can, 1 of 3-gallon capacity and 1 of 12 quarts. We are correcting them, too.

The fact that we have assigned 3,500,000 stock numbers does not mean that we have all the answers pertaining to all of those items recorded centrally. All of this information actually is available, but we have not placed it centrally in our catalog system. That is item status information.

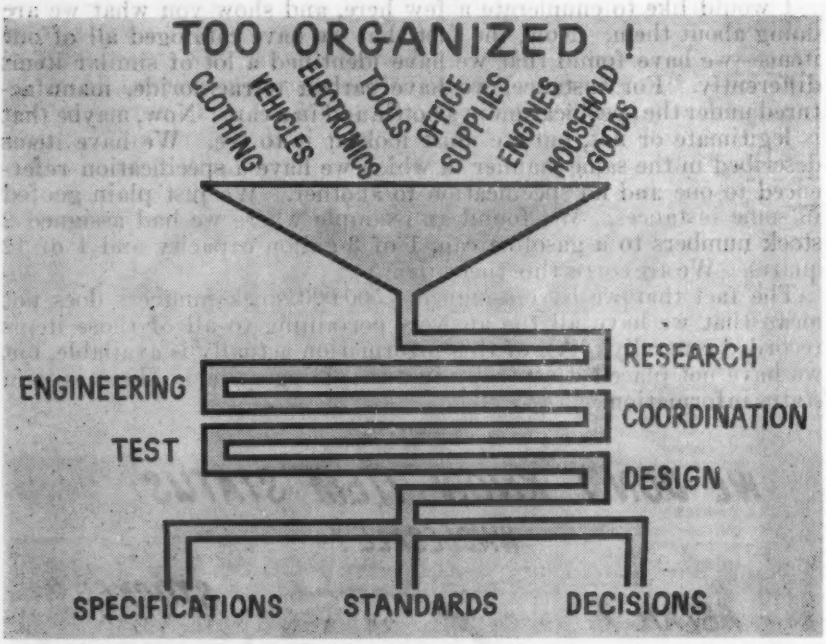
CHART 13



We don't know whether an item which is managed at the wholesale and retail levels in one service is managed only at the retail level in another. We don't know when an item which is stocked centrally in one supply system is procured locally in another. We don't know whether some items are standard or nonstandard.

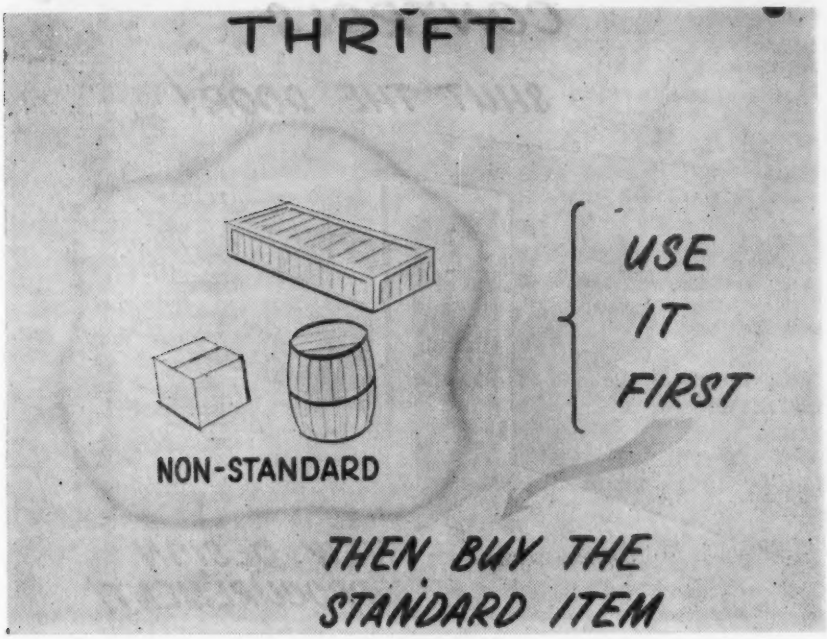
We don't know whether a stock number represents only a reference for use in allowance lists or tables of organization or whether there is actually inventory against it—or whether an item has become obsolete since we cataloged it. This information we are going to obtain centrally and record in our catalog system.

CHART 14



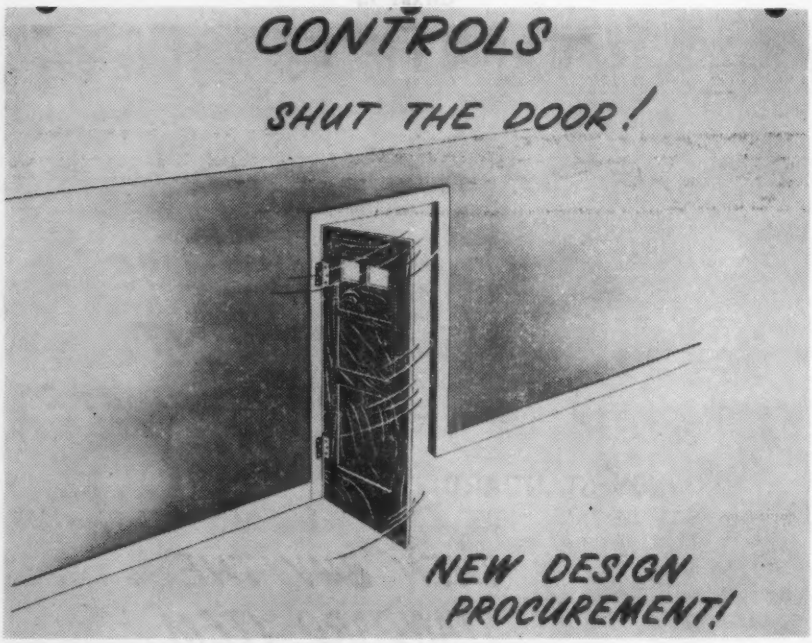
We found that we were too well organized in our standardization effort. We were treating all commodity areas complex and simple, from electron tubes to office supplies, in the same manner, to obtain simplification as well as other parts of our standardization program. We were applying to the simple commodity areas the same techniques we require for the complex commodity areas. Going through research, engineering, departmental coordination, tests, design, or redesign—in order to develop our specifications and standards, and to make decisions, which we need quickly as to the items we actually need to keep in our system.

CHART 15



We found that we must insure that we are exercising thrift, so that when we have selected some items we had as standard and declared others as nonstandard—we use up the nonstandard ones before we reprocured standard items.

CHART 16



We are building in controls to insure that. And these controls are particularly troublesome. It is very difficult, with the number of items we have, to be sure that we have firm controls so that once we have declared an item no longer authorized, that it doesn't reappear in new design or in procurement. We are closing that door so that will not occur unless there is a technical justification for the reuse of such items.

Mr. BATES. How do you work out that thrift example that you just gave us a few moments ago?

Secretary MCGUIRE. I wonder if I could speak to what he is driving at.

Mr. BATES. I think I understand the point, but I don't understand the mechanics.

Secretary MCGUIRE. I would like to see if I can give you an illustration.

In the mail order business, for example, when they issue a catalog, it is common practice when they have an item that they are buying to also look at the items they have in inventory and determine which items that they have in inventory they can substitute or line into that item. Now, what we are trying to do here is that when we standardize an item we look at the items that are nonstandard, if you will, and

determine to the maximum degree possible a substitution capability for the standard one, so that everybody just doesn't go off and always want the new one. They have to remember the old.

Now, this won't work all the time, and there will be errors in this. But the point here is to have the man continue to order the old until the new becomes available.

Mr. BATES. Well, my question was on the mechanics of a thing like that. You might have relatively low numbers of items that you could get rid of at a particular depot over a period of time. On the other hand, in another section of the country you might have them depleted entirely. Now, what would you do under those conditions?

Secretary MCGUIRE. I would like to give you one example.

Mr. BATES. Would you let one section work out its problem rather than going to the cost of transporting it to the other side of the country?

Secretary MCGUIRE. We certainly would have to consider that factor. I would like to give you one example. We found out that in the medical area, through purchases that were made on an emergency basis during Korea, we had what were nonstandard pajamas in a substantial amount. We got the agreement of the Surgeons General that while a standard pajama was desirable, it was also desirable to use up what we owned that was nonstandard. From a requisitioning point of view they were interchangeable. They reduced the price on the nonstandard pajama. Now, this didn't cost the United States Government anything, but it put an incentive on the people to use those pajamas up first, and we are now doing that.

We had another situation where we standardized a hosiptal bed on a color. We had had three previous colors of hospital beds. We are issuing the three colors now. Standardization factor does not become effective until we have used up our current inventory of the nonstandard colors.

Mr. BATES. Because a lot of times you run into the problem if somebody has a load of something, and they want to get rid of it, obviously, so they can use the new, they will ship out the whole shebang.

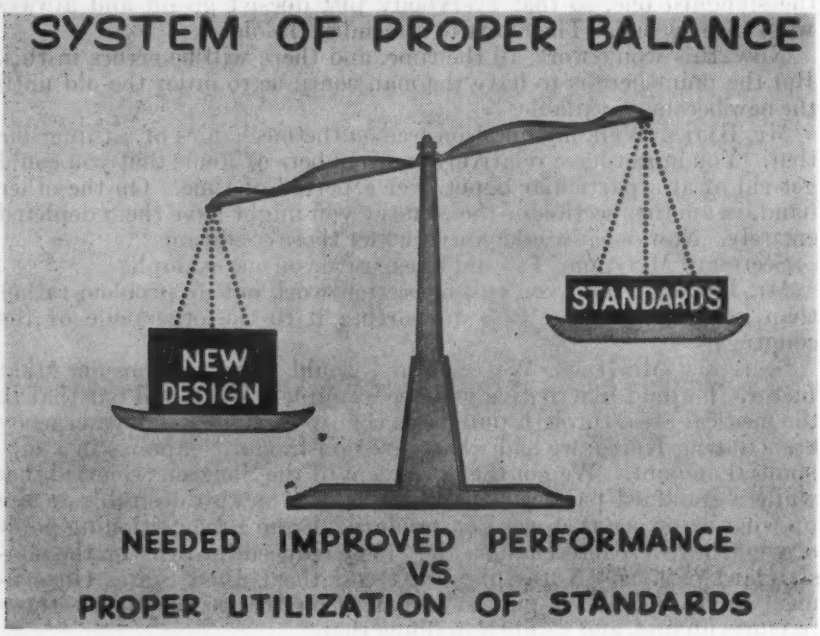
So instead of that fellow using it, somebody else has to use it. I got burnt on that one time trying to help somebody, and what a bunch of cats and dogs I wound up with.

Secretary MCGUIRE. Well, this is obviously part of the problem and you have to be sure that what you are shipping out is of good quality and isn't in the "cat and dog" category, as you describe it.

Now, there will be errors on this, I recognize, but the basic point here is to try to make a maximum utilization of the inventory, that this does not get into an area where we say, "Well, we don't want this because there is something new over here."

Mr. RITTER. Thank you, sir.

CHART 17



Continuing here on the solution of some of our problems, we found that we needed to establish and maintain a proper balance in the use in new design of items required for improved performance, that is, new items, and the standard items we already had in our system. I don't mean to imply that new design does not use standard items. It does extensively. But there is a constant problem of keeping that balance to prevent new items from being used instead of the ones we have already which are standard.

CHART 18

In summary, as a result of our working on these items in which you indicated an interest, we found we needed to change some of our signals. We needed to record centrally our item status information to provide us with better management tools. We need to concentrate our efforts on the high payoff areas. We term that the simplification piece of this job, so we can get a quick reduction and thus eliminate the cost of handling the larger quantity of items.

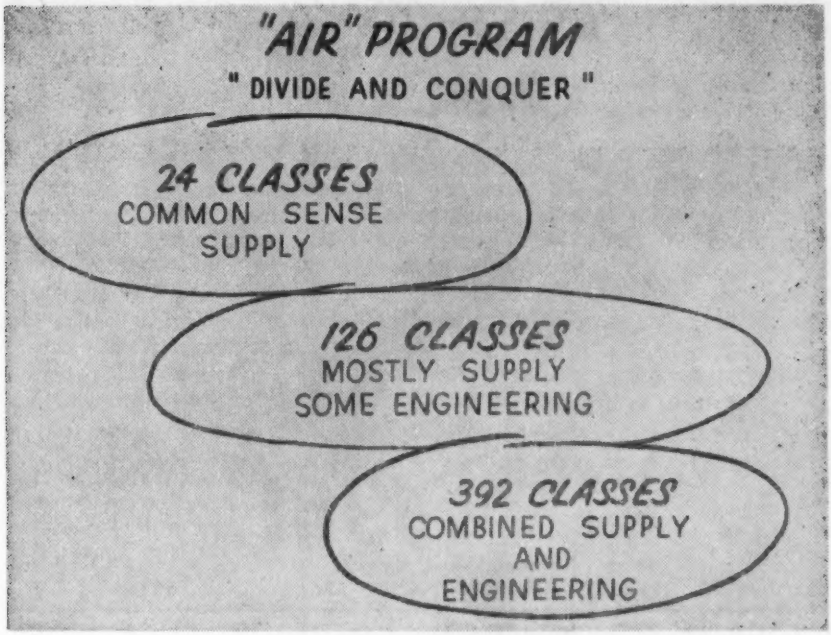
33405—59——4

CHART 19

And we had to establish better controls. To do that we have developed what we term our accelerated item reduction program, our "AIR" program.

This program was based upon the concept that we realize we do not have to treat all commodity areas the same way. We can handle simple areas much differently than we handle the technical ones, and that we don't have to confine our efforts in item reduction to engineering and technical people who had a big job of their own, but we can utilize supply people to help out in this. If we can lift off this slice of the standardization program, that is simplification, and concentrate our supply and technical resources on that and do the job quicker, and thus realize the benefits at an earlier date.

CHART 20

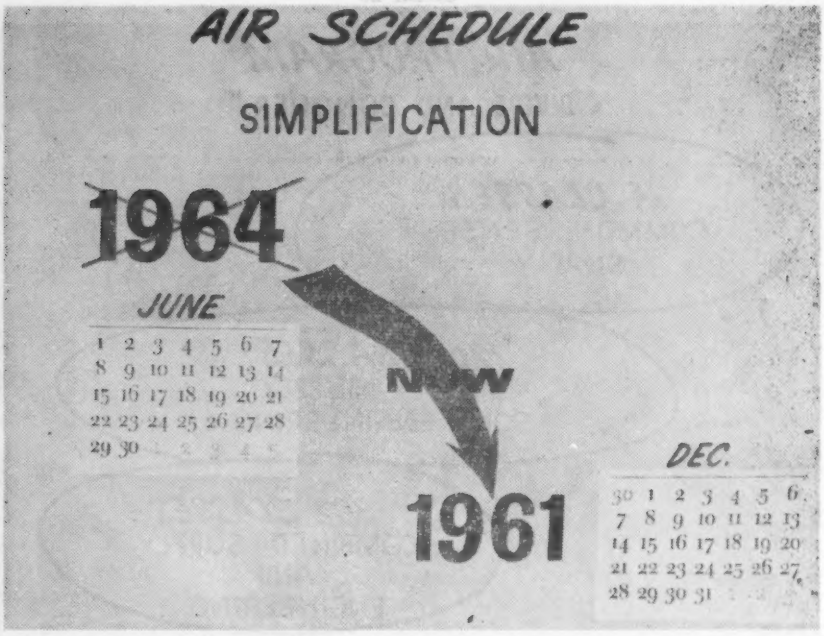


Accordingly, we divided our items. In the first group we selected 24 classes of what we call commonsense supply items. They are the housekeeping items—the wastebaskets, the erasers, the pens and pencils, where supply people alone can make sandardization decisions.

In the next group, of 126 classes, we selected those where supply people can make most of the decisions, with some consultation with engineering people.

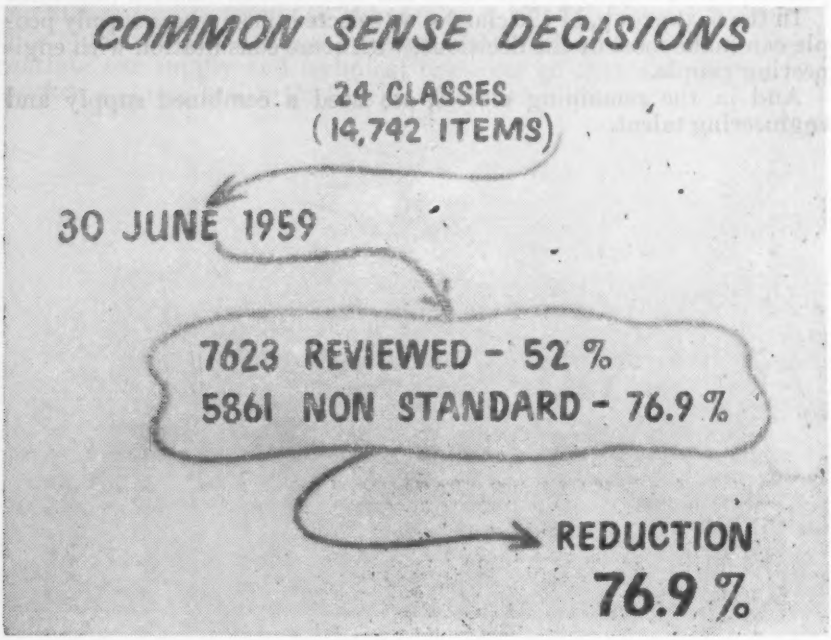
And in the remaining classes, we need a combined supply and engineering talent.

CHART 21



In lifting out the simplification portion from the standardization program, which is scheduled for completion in 1964, we can reduce that to 1961—a 2½-year reduction in this simplification job.

CHART 22



Now, in these 24 commonsense areas, or where we could make commonsense decisions by just looking at a range of items we carry, there were 14,742 items involved. We set a target date of June 30, 1959, for the complete standardization of those items.

Of the 14,742 items we have in these areas, we have reviewed 7,623, or 52 percent and we have declared 5,861 as nonstandard. In other words, 76.9 percent were declared as nonstandard.

Now, I want to level with you, though, gentlemen. We knew that we were going to have a big reduction here. The items selected here for review, even among these common ones, were the ones that we knew we could reduce to the greatest extent. We did it intentionally.

First, we wanted to test our techniques on simple areas, where we would have no technical complexities. Secondly, we wanted to get as big a reduction here as possible in order to generate some enthusiasm for this kind of an operation.

Now, this we do not expect to achieve, anything near that percentage in our overall program.

CHART 23

EXAMPLES OF ITEM REDUCTIONS

ITEM	NUMBER REVIEWED	DESIGNATED STANDARD	TO BE DELETED	% REDUCTION
WASTEBASKETS	18	(MIL. STD. 16874) 2	16	89%
BINDERS, LOOSE LEAF	384	(MIL. STD. 16704) 96	288	75%
ERASERS	98	(MIL. STD. 16643) 17	81	83%
RIBBONS, OFFICE MACHINE	726	(MIL. STD. 16645-16701) 110	616	85%

These are some of the examples that we have realized in these 24 areas we have reviewed. Of the 18 wastepaper baskets that we formerly had, we have selected 2 as standard. We have deleted 16. That is a reduction of 89 percent.

Of the 384 looseleaf binders we examined, we have selected 96 as standard, earmarked for deletion 288, or a reduction of 75 percent.

In the eraser area, we had 98. We only selected 17. Since publication of the standard we have knocked 1 of them out, leaving us 16. 81 to be deleted. 83 percent reduction.

Mr. BATES. What do you need 17 different kinds of erasers for?

Mr. RITTER. I was hoping you would raise that question, sir.

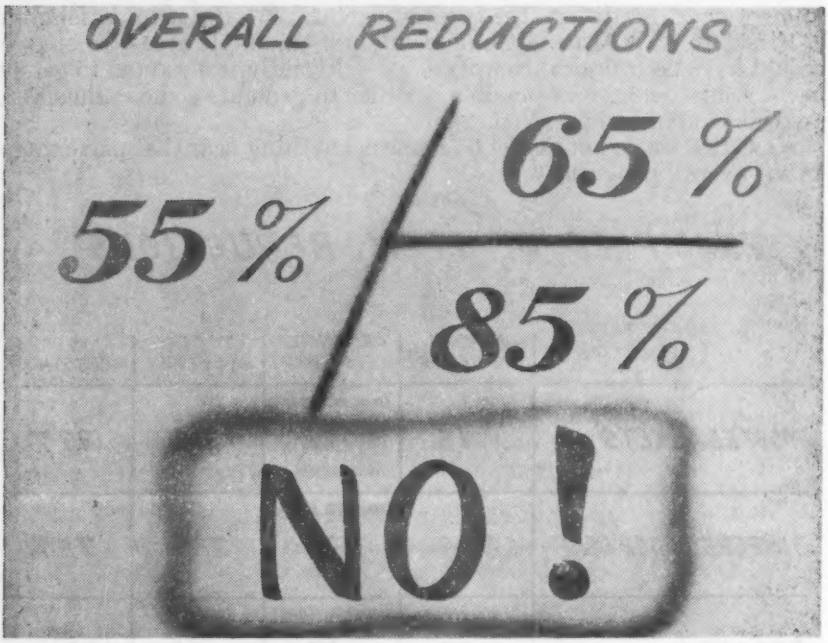
Mr. BATES. Don't take too much time on that.

Mr. RITTER. I would like you to know what these are. These range from specialized erasers used in artwork to erasers used in the preparation of reproducible masters where great care must be made in removing carbon impression. The electric erasers used in graphics. And just plain chalk erasers.

Mr. HARDY. If you could get people not to make so many damn mistakes, you wouldn't need that many, would you?

Mr. RITTER. No, sir; we wouldn't. We hope to reduce that further.

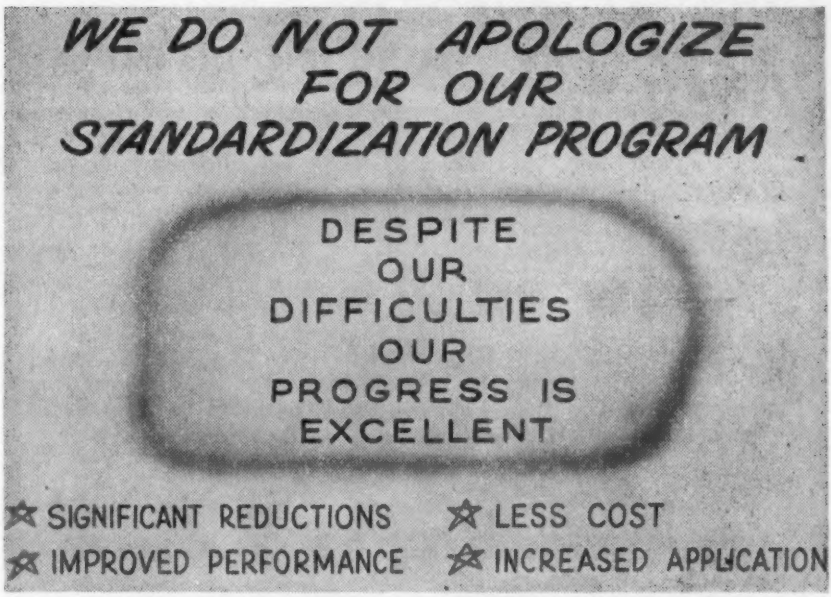
CHART 24



Now, again, I would like to leave this impression. We don't know whether we are going to have 5, 10, or 15 percent overall reduction. Certainly not 55, 65, or 85 percent across the board. Now, even if we have 10 percent overall reduction, considering 3½ million items, 350,000 items is well worth the efforts we have devoted in this direction.

I would like to point out further that our air program, which I indicated we had developed to solve some of these problems—it isn't a panacea, either. We have examined it carefully since we started working on it last year. We have discovered a number of weaknesses which we know about, and which we are taking action right now to correct. So we feel that we are improving it, even though we thought we had a pretty good scheme when we started. We are tightening it up so it will achieve a much better product for us.

CHART 25



Now we don't apologize for our standardization program. Despite a number of these problems I have enumerated, we feel our progress is pretty good.

We have made significant reductions in the number of items in our supply systems. We have improved the performance of others through redesign and new design, thus increasing their life usage.

We have redesigned materials and standardized processes to bring about reductions in cost. And we have increased application by extending interchangeability.

Now, as Secretary McGuire indicated, we have a number of exhibits here which illustrate work that has been accomplished. Mr. John Dunn, who is directly in charge of standardization in the Armed Forces Supply Center, is here, and he will discuss those exhibits with you.

Mr. Dunn.

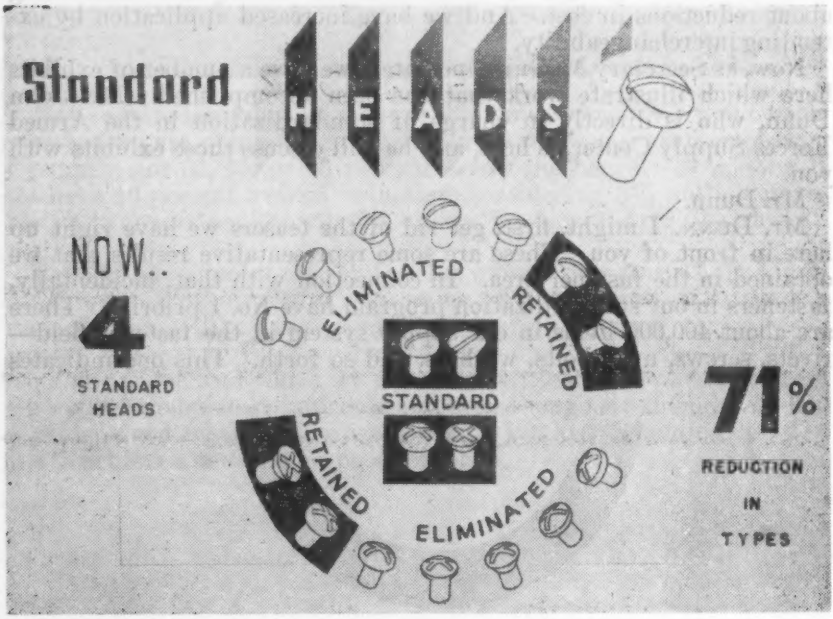
Mr. DUNN. I might, first, get rid of the teasers we have right up here in front of you. These are some representative results that we obtained in the fastener area. In connection with that, incidentally, fasteners in our standardization program have No. 1 priority. There are about 400,000 items in our supply system in the fastener field—rivets, screws, nuts, bolts, washers, and so forth. This one indicates

CHART 26

what has been done with respect to the head styles for rivets. A reduction from 4 to 1. These four become nonstandard and the gold-plated one standard.

Now, obviously, the tools with which these must be applied likewise are standardized to conform to this head.

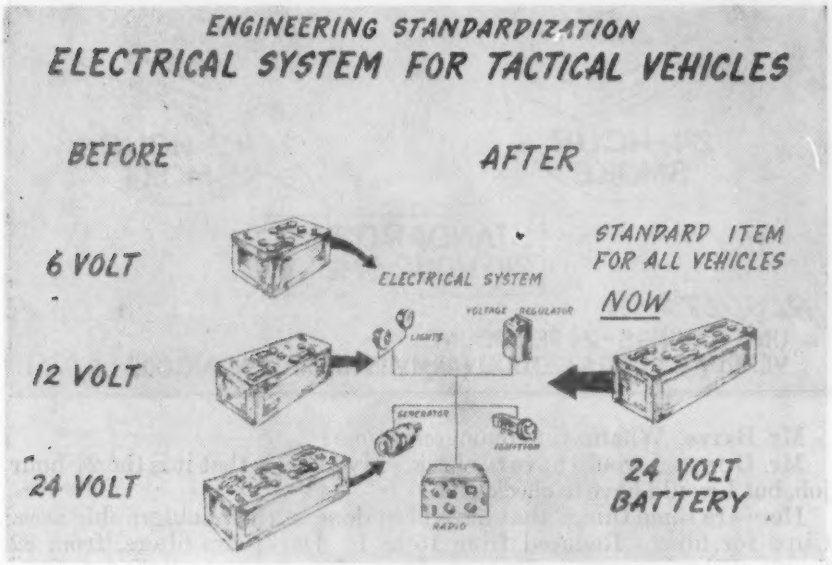
CHART 27



In the front one it suggests what has been done with respect to one characteristic of machine screws, the head style. A total of 12 head styles have been reduced to 4.

Now, in addition to the head style in connection with machine screws, several other characteristics were likewise standardized, such as the diameters of the shanks, the lengths under the head, and the finish. All in all, in this particular area, my recollection is we reduced our items from something like 19,000 to 6,000.

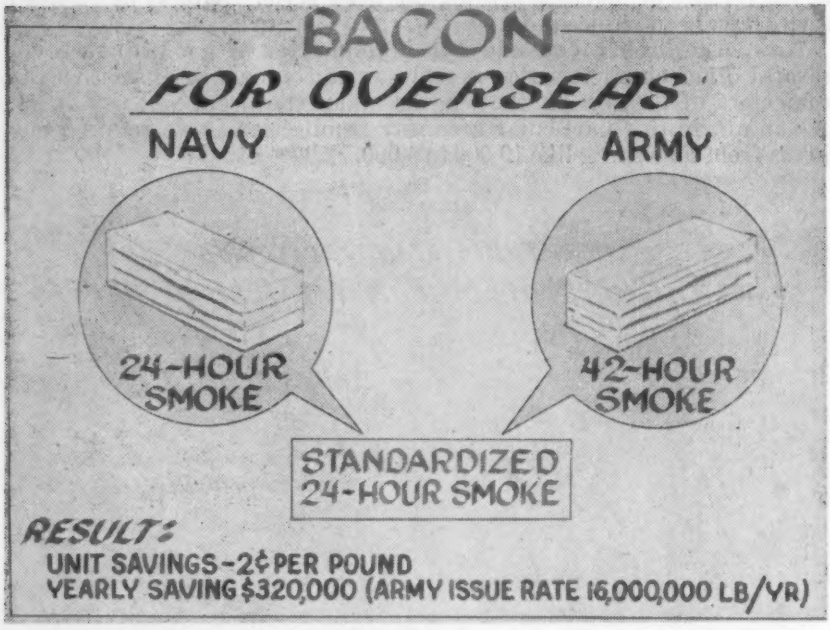
CHART 28



This chart suggests the results of what we call an engineering standard, and that is the adoption of a single voltage, a single operating characteristic for tactical vehicles. We previously had 6-, 12-, and 24-volt systems. We adopted as standard the 24-volt system. Now, obviously, this enabled us to reduce the associated gear in the electrical system of these tactical vehicles, such as voltage regulators, and so on, proportionately. This applies, of course, to a great number of equipments.

Mr. DUNN. We have done something with respect to bacon. The length of cure for overseas use has been reduced from 42 to 24 hours, with annual savings of $320,000.

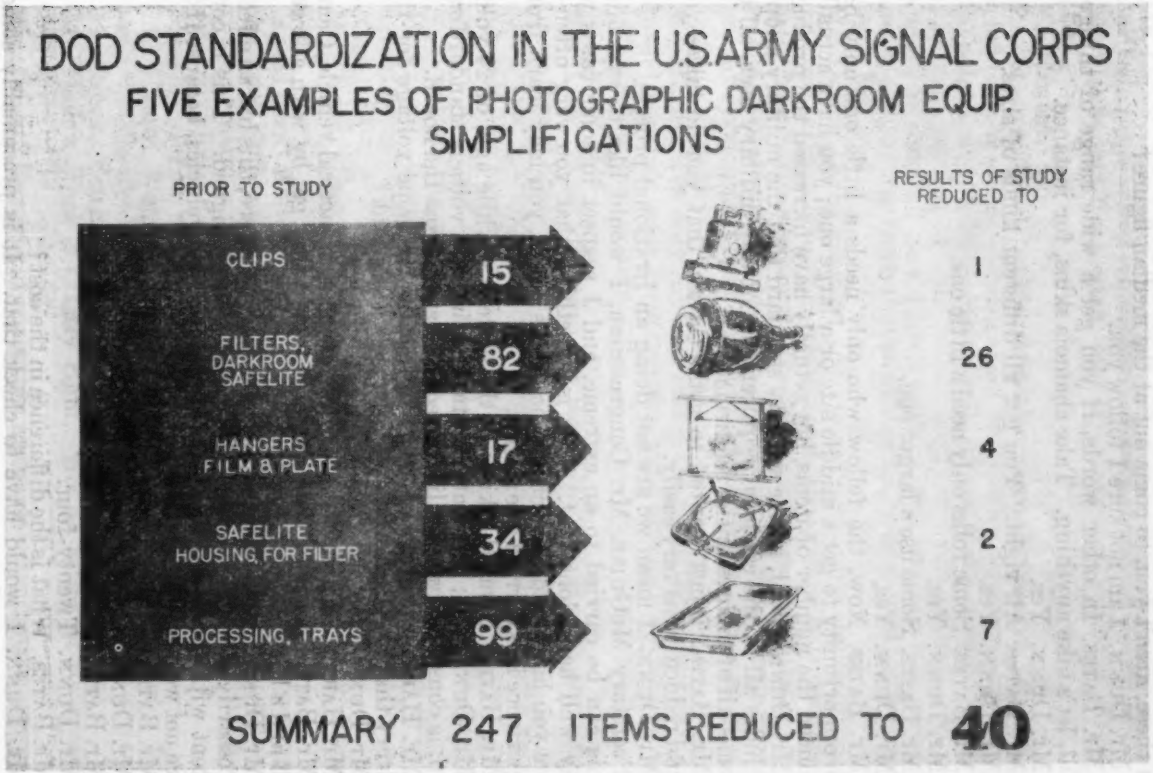
CHART 29



Mr. BATES. What is the commercial time?

Mr. DUNN. I would have to check. My guess is that it is the 24-hour job, but I would have to check that.

Here are some things that have been done in the photographic area. Clips for films. Reduced from 15 to 1. Darkroom filters, from 82 to 26. Film hangers and plates, from 17 to 4. Safe light housings for filters, from 34 to 2. Processing trays, from 99 to 7. The total here on this particular chart: 247 items reduced to 40.


DOD STANDARDIZATION IN THE U.S.ARMY SIGNAL CORPS
FIVE EXAMPLES OF PHOTOGRAPHIC DARKROOM EQUIP. SIMPLIFICATIONS
PRIOR TO STUDY
RESULTS OF STUDY REDUCED TO
CLIPS
15
1
FILTERS, DARKROOM SAFELITE
82
26
HANGERS FILM & PLATE
17
4
SAFELITE HOUSING FOR FILTER
34
2
PROCESSING, TRAYS
99
7
SUMMARY 247 ITEMS REDUCED TO 40

Mr. BATES. I would like to just ask one question.

Mr. DUNN. Yes.

Mr. BATES. You are going to have to upgrade some of the costs on these, aren't you, to come out at the median figure?

Mr. DUNN. I am not sure I follow you.

Mr. BATES. In other words, if you get a wide range of things—well, let's take anything. Take chamois skins, for instance.

Mr. DUNN. Yes.

Mr. BATES. All right. You got all different kinds of sizes.

Mr. DUNN. Yes.

Mr. BATES. Some folks only need a little one.

Mr. DUNN. Yes.

Mr. BATES. Some use a larger one.

Mr. DUNN. Yes.

Mr. BATES. Now, the fellow who only needs a little one only has the opportunity to get a middle size or a large one; you have actually reduced the number of items, but actually have increased the product.

Mr. DUNN. Well, let me say any standard that the military adopts includes all of the essential requirements of any military user, all of them—all of their essential requirements.

Mr. BATES. I just wanted to make certain that you do take—you could reduce items very easily.

Mr. DUNN. I mean we are not doing an irrational process.

Secretary MCGUIRE. Mr. Congressman, I would like to say this: This can be carried to an extreme, and I suspect in some cases we may well have done that. This is something that you very often—once you have made a decision that looks sound, you may learn from experience it is carried to extreme.

Mr. BATES. I was thinking of the battery a while ago, of 24 volts.

Mr. DUNN. No; that battery standardization, voltage standardization, is consistent with military requirements across the board.

Mr. HARDY. You mean you have to have the same voltage for the battery that goes in a jeep as you have in a big tank?

Mr. DUNN. Tactical vehicles.

Mr. HARDY. Tactical vehicles. A jeep is not a tactical vehicle, then?

Mr. BATES. Some of these vehicles—could they get by with a lower volt and a less cost battery?

Mr. DUNN. Not according to the design. You see, this has an effect, necessarily has an effect, on how vehicles are designed. This is consistent with the design requirements for tactical vehicles, because if it were not we never could have adopted it.

Mr. BATES. Well, you had some 6-volt before.

Mr. DUNN. This is true.

Mr. BATES. All right. They use a 24 now?

Mr. DUNN. Twenty-four.

Mr. BATES. What is the difference in the cost?

Mr. DUNN. I would have to check that. It is presumably something more expensive.

Mr. BATES. And they could get by with a six?

Mr. DUNN. For certain applications in the past. And these requirements may not presently exist. I don't know.

Mr. BATES. Well, you understand the point I am making.

Secretary MCGUIRE. Yes, sir.

Mr. BATES. And you are taking that into consideration?

Secretary MCGUIRE. Oh, yes.

Mr. BATES. All right.

Mr. DUNN. The point I make is that every standard we adopt is responsive to the essential requirement of every service.

Mr. BATES. Mr. Chairman, may I be excused? I have to get a plane.

Mr. HÉBERT. Yes.

Mr. HARDY. If we might, Mr. Chairman, before we proceed, I started to raise some questions about this battery business, just for the same point that Mr. Bates has raised. If you had a substantial number of vehicles that utilized satisfactorily a 6-volt battery, and you standardize them all on a 12-volt battery, you are certainly going to increase the cost for those that could normally do a good job by using a 6-volt battery.

Mr. DUNN. If the question you are asking is does standardization from time to time involve increased cost, the answer is from time to time it does. However, in a situation such as we are talking about here, the ultimate design objectives in tactical vehicles, considering the course of development that is planned to take place, is consistent with the standard that has been adopted.

Mr. HARDY. The only reason I raised the point, Mr. Chairman, is I happen to operate some farm tractors, some of which use 6-volt, some use 12, and some use 24 volts.

Mr. DUNN. Yes.

Mr. HARDY. And I know to buy the 12- or 24-volt costs an awfully lot more than it does to replace one of those 6-volt ones.

Mr. DUNN. Certainly. One other facet of this thing which maybe you would like to give some thought to, is this; that with the 3 cited sizes here we would have to carry 3 regulators, for example, in stock to support these things.

Mr. HARDY. It wouldn't surprise me if you wouldn't have to carry different types of regulators anyway, even though you have the same voltage.

Mr. DUNN. Until such time as they are attrited from stock, I would agree.

Mr. HARDY. More than that. You are probably going to have to make some different change in your mountings that the generators carry or wherever else the regulators happen to go. They won't necessarily all fit.

Mr. DUNN. I am not sure I follow your point, Mr. Hardy.

Mr. HARDY. Well, what I am talking about is a regulator for a 24-volt vehicle wouldn't necessarily fit every other 24-volt system.

Mr. DUNN. You mean in terms of the affixing to the chassis?

Mr. HARDY. That is exactly right. Not in terms of its capacity, but in terms of its mounting.

Mr. DUNN. This would constitute a separate standardization problem, if such a problem exists.

Mr. COURTNEY. Well, may I ask a question right there, Mr. Chairman?

Mr. HÉBERT. Yes.

Mr. COURTNEY. If I understood you correctly, Mr. Dunn, what you were saying was that the standard design—let's take specifically the 24-volt battery—is designed into the vehicle for which it is destined.

Mr. DUNN. That is true; the family of vehicles, tactical.

Mr. COURTNEY. Family of vehicles. That includes all tactical vehicles?

Mr. DUNN. Right.

Mr. COURTNEY. So any vehicle that comes into the system will have in it provision for the utilization of the 24-volt standard-type battery that you have shown here?

Mr. DUNN. That is true.

Mr. COURTNEY. So this anticipates the use; is that right?

Mr. DUNN. That is right.

Mr. COURTNEY. That is what I understood you to say.

Mr. DUNN. The basic function of a standard is to control the design.

Mr. COURTNEY. So before it comes into the system it is adaptable?

Mr. DUNN. That is right.

Mr. HARDY. All right. That is a little different from trying to standardize with respect to equipment that is already on hand, which you couldn't do anyhow. But, even so, if you have a light vehicle that normally has operated satisfactorily with a 6-volt system, and you are going to a 24-volt system, you are increasing pretty sharply the cost of your battery. You are increasing the cost of your generator and you are increasing the cost of some other components that go into that 24-volt system.

Mr. DUNN. What you are suggesting is that this may involve overdesign?

Mr. HARDY. That is exactly what may be involved.

Mr. DUNN. Yes. This is simply not the case. This is consistent——

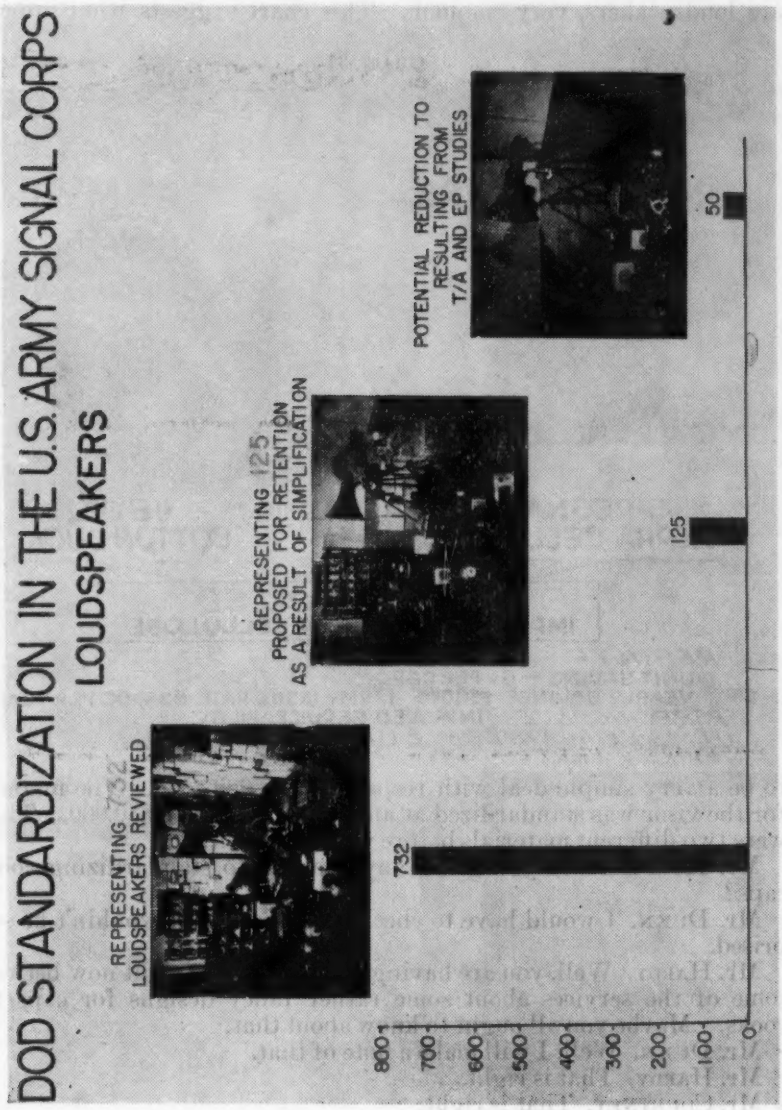
Mr. HARDY. I wish I could depend on that. And I am confident that that is what you believe.

Mr. DUNN. Yes.

Mr. HARDY. But I am also confident it may not be true.

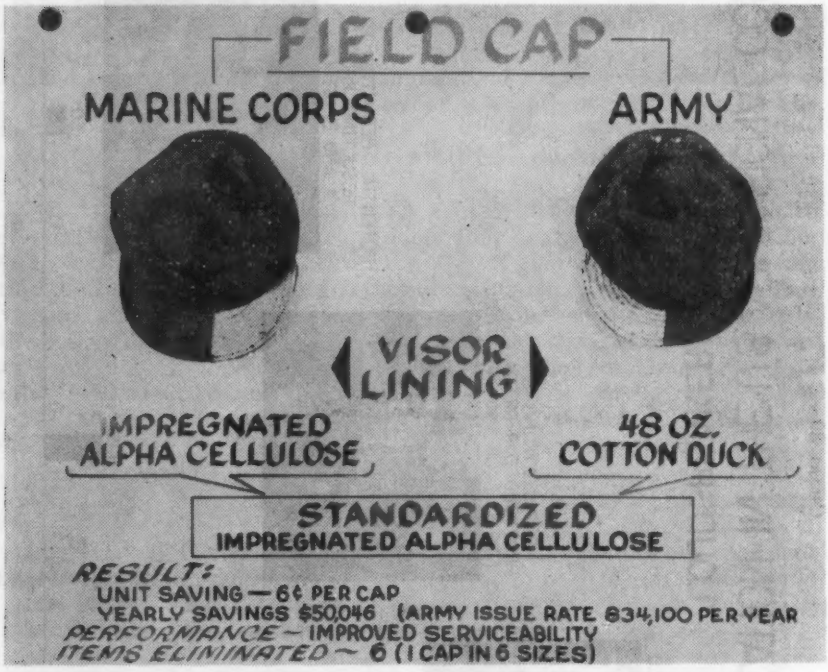
Mr. DUNN. Yes. Let me just research that and give you a note on that.

CHART 30


DOD STANDARDIZATION IN THE U.S. ARMY SIGNAL CORPS
LOUDSPEAKERS
REPRESENTING 732
LOUDSPEAKERS REVIEWED
REPRESENTING 125
PROPOSED FOR RETENTION
AS A RESULT OF SIMPLIFICATION
POTENTIAL REDUCTION TO
RESULTING FROM
T/A AND EP STUDIES
800
700
600
500
400
300
200
100
0
732
125
50

This chart suggests what was done with respect to loudspeakers. In the sequence of events Mr. Ritter described, the 2 stages of standardization, they were reduced in the simplification phase from 732 to 125. In the technical analysis phase, from 125 down to 50. These are loudspeakers, very common. This chart suggests what appears

CHART 31



to be a very simple deal with respect to the field cap. The material for the visor was standardized at an annual saving of $50,000. There were two different materials before we looked at it.

Mr. HARDY. Have you given any thought to standardizing cook's caps?

Mr. DUNN. I would have to check, Mr. Hardy. I wouldn't be surprised.

Mr. HARDY. Well, you are having a little feuding right now between some of the services about some rather fancy designs for caps for cooks. Maybe you all ought to know about that.

Mr. DUNN. Well, I will make a note of that.

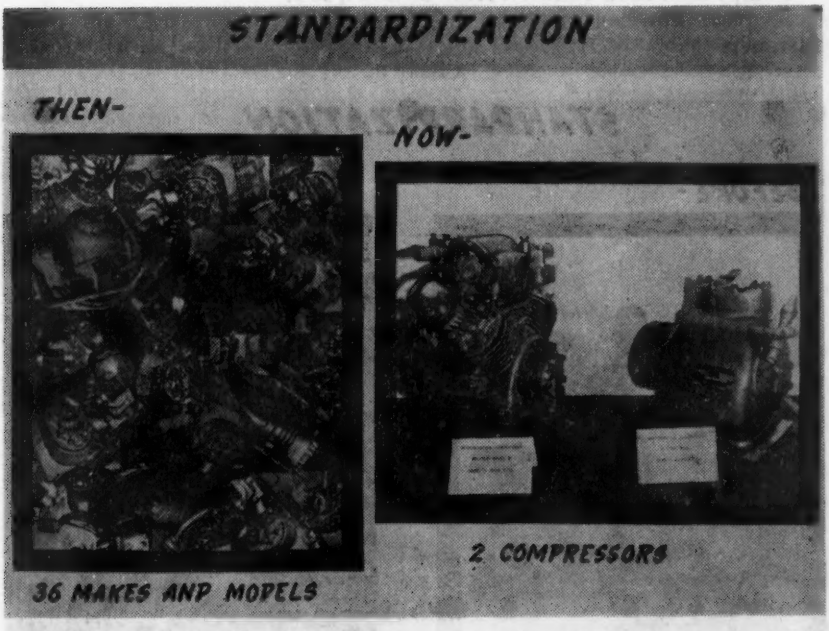
Mr. HARDY. That is right.

Mr. COURTNEY. That is right.

Mr. HARDY. I have had to make a few inquiries about that.

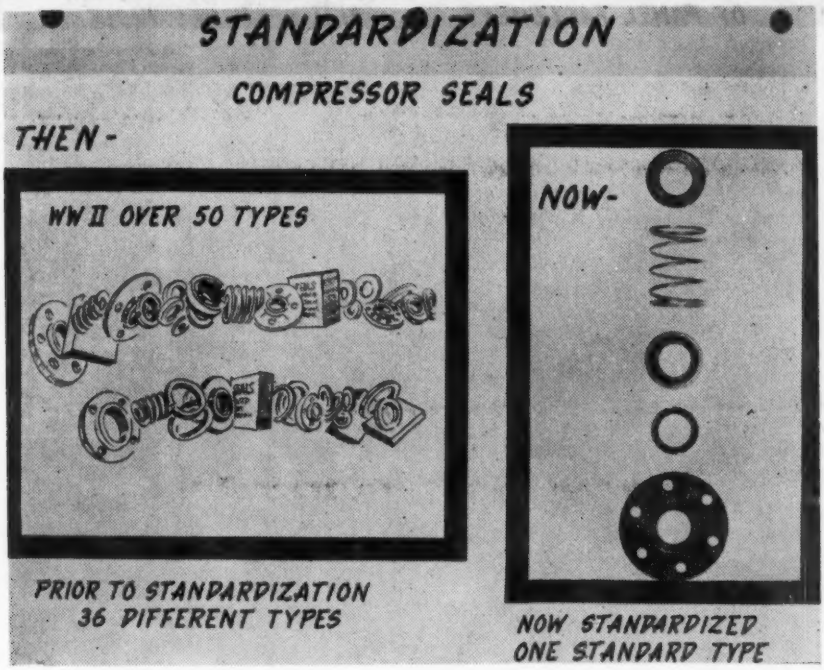
Mr. DUNN. Yes. As I say, I will make a note and take a look.

CHART 32



This is a standardization of compressors from 36 makes and models down to 2 standard ones. Those are rather involved items.

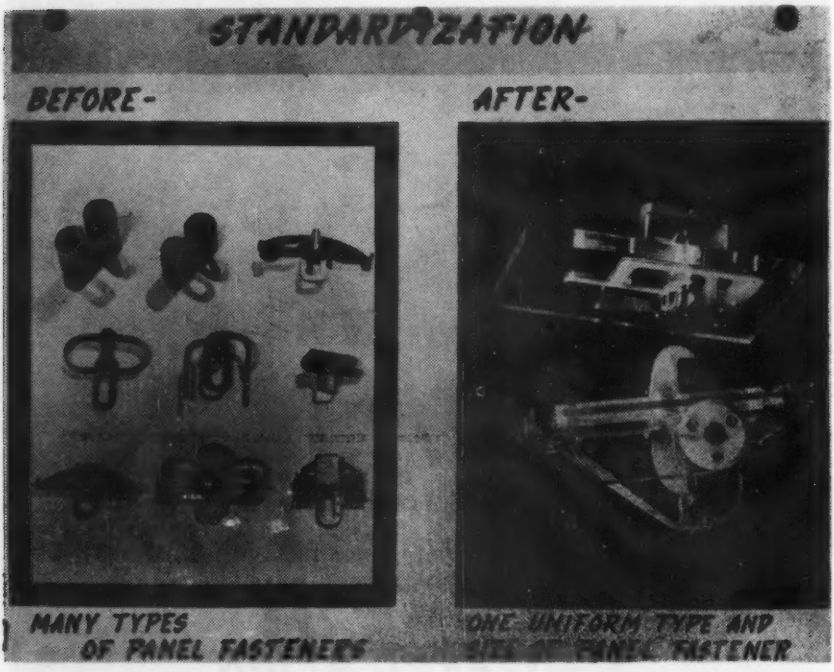
CHART 33



Compressor seals reduced from 36 down to 1.

A great number of panel fasteners down to one uniform panel fastener.

CHART 34



Mr. HARDY. Let me ask you about this compressor-seal thing that we had just a moment ago. I don't think we need that. The question that is in my mind is simply this: Does that new seal accommodate the requirements of all manufacturers of compressors, or does it limit you to a specification which requires that you have to procure compressors from only a single manufacturer?

Mr. DUNN. No. Our standards normally are nonrestrictive.

Mr. HARDY. Yes, but if you put out proposals for the supply of compressors on the basis of the specifications of one manufacturer, you might run up the cost in subsequent procurement.

Mr. DUNN. If this were true, I would agree.

Mr. HARDY. That is what I am wondering about. When you come down to a single seal for your air compressors——

Mr. MILNE. That was developed, Mr. Hardy, in cooperation with the compressor manufacturers.

Mr. HARDY. With one, or with all of them?

Mr. MILNE. All of them.

Mr. HARDY. Of course, that is the question. If that is the fact, if it is interchangeable for all of them, you have accomplished something. But I would be rather surprised if you don't have cases come in where a manufacturer will say, "Well, we won't bid because they put out specifications to meet somebody else's product." You know we have that all the time, Mr. McGuire.

Secretary MCGUIRE. I think you will have cases come up of that kind.

Mr. DUNN. There are always cases of that kind, but we don't promote it by virtue of this activity.

Mr. HARDY. I hope not. But it could be. If your design of your item is standardized to a single manufacturer, it could be.

Mr. DUNN. Sure. I would understand that.

ENGINE ACCESSORY STANDARDIZATION DOD PROGRAM CE-ORD-IND

ITEM	REDUCTION		STATUS		
	FROM	TO	MIL STD	SPEC	QPL
GENERATOR 5 AMP	92	1			
GENERATOR 18 AMP	98	1			
GENERATOR 40 AMP	52	1			
AIR CLEANERS	174	8			
OIL FILTERS	77	6			
THERMOSTATS	350	8			
RADIATORS	242	8			
GOVERNORS	85	4			
MAGNETOS	199	6			
STARTING MOTORS	241	6			
ENGINE MOUNTINGS	46	7		NOT APPLICABLE	NOT APPLICABLE
FUEL PUMPS	39	3			
MUFFLERS	224	8			
CARBURETORS	346	11			
TOTALS	2265	78			

This chart suggests a number of projects that are in progress, and some completed, with respect to accessories connected with industrial engines. Generators, 5 and 18 amperes; air cleaners, oil filters, thermostats, radiators, and so forth.

I have a covered exhibit here relating to one of these things I will show you shortly. But this indicates the rate of progress on each of these two projects. Now, these things are done in fact by industry for us, based on the principle that the resulting standard must be producible on the basic tooling available in this industry. This is a long-range program, and a very successful one. This particular thing is going to show a reduction in accessories from 2,265 down to 78.

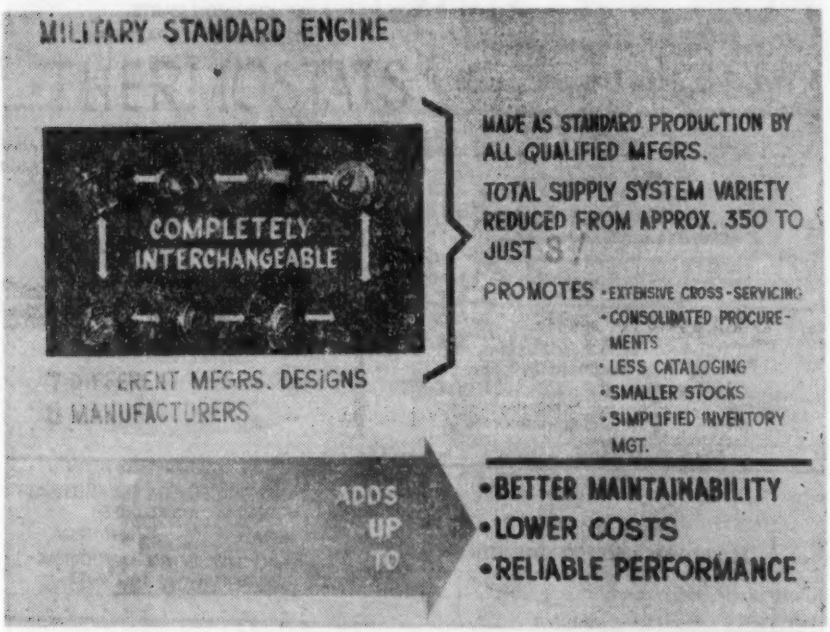
Mr. HÉBERT. Now, in that connection, Mr. Dunn, and pursuing Mr. Hardy's questioning, then you say it is produced in connection or in cooperation with this industry; you mean industrywide?

Mr. DUNN. I mean the engine industry; yes, sir.

Mr. HÉBERT. Industrywide?

Mr. DUNN. Yes, sir.

CHART 35



Here is an example of one of these projects. I don't know whether I can haul this or not. These are thermostats, with which I guess you are all familiar. They have been reduced from 350 down to 8. These are producible by everybody in the thermostat business with the tools he has.

Mr. HARDY. But now there you say they are completely interchangeable. That group that you have on the board there?

Mr. DUNN. Yes.

Mr. HARDY. You have been able to reduce those, if they are completely interchangable, to one; is that right?

Mr. DUNN. No. We have reduced 350 to the 8 displayed here. One is missing. I have it in my pocket, I think, somewhere.

Mr. HARDY. Well, the only thing that I was getting at is this: All thermostats are not interchangeable.

Mr. DUNN. This is true, Mr. Hardy, and we have eight standard ones.

Mr. HARDY. Oh, I see.

Mr. DUNN. Supporting what you say.

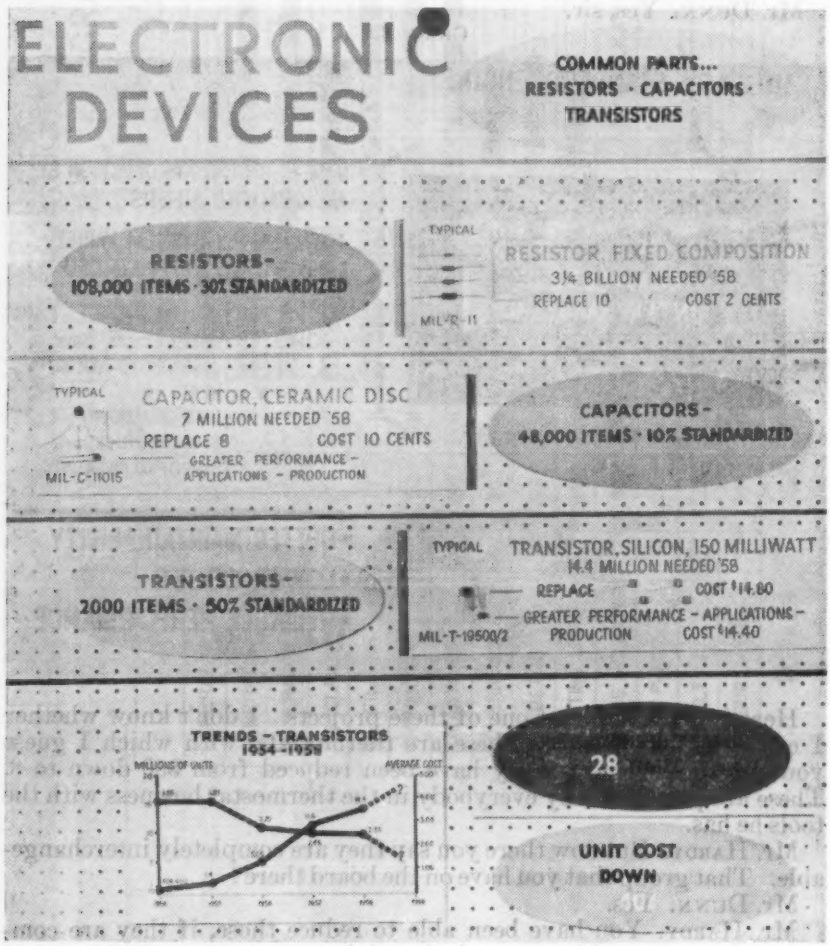
Mr. HARDY. So those eight standard ones that you have now will fit everything that you require for thermostats?

Mr. DUNN. Fit the 350 former types.

Mr. HARDY. I see.

Mr. DUNN. Yes. Standardization is not a reduction to one. It is a reduction to the minimum needed to meet your requirements.

CHART 36



I can't carry this chart, but this suggests some of your activity in the field of resistors. This is an electronic component. We have approximately 100,000 of these things in our supply system. We have progressed in our standardization about 30 percent along the way.

Here is a typical resistor. These are used at the rate, in 1958, of 3¼ billion of these items.

Now, these 4 standard resistors replace 10. You will get an understanding of the kind of savings when you consider the rate of use for this particular thing.

Here is a capacitor, another electronic component, of which we have 48,000 in our our supply system, and we are about 10 percent along in our standardization job.

This 1 capacitor has replaced 8, and we have under development an improvement which will give us greater performance for that standard item.

Transistors, another component. There are about 2,000 items, and we have about halfway finished with standardization. This 1 replaces 4.

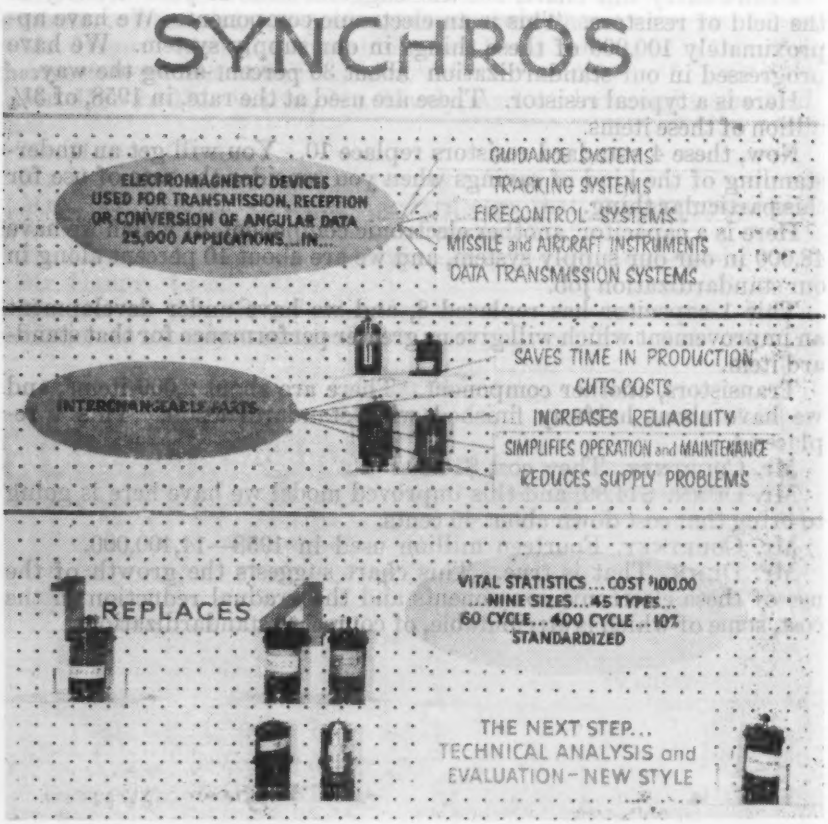
Mr. COURTNEY. They cost $14.80?

Mr. DUNN. $14.80, and this improved model we have here is going to bring that cost down about 40 cents.

Mr. COURTNEY. Fourteen million used in 1958—14,400,000.

Mr. DUNN. That is true. This chart suggests the growth of the use of these electronic components and the gradual reduction in the cost, some of which is attributable, of course, to standardization.

CHART 37



Another electronic component is synchros. There are about 5,000 applications for this particular item in our various electronic gear. Here is 1 item which replaces 4. And this one item is under study for improvement to get better performance at the present time.

There is $1,000 worth of equipment on that board.

Mr. COURTNEY. What is the rate of use of that?

Mr. DUNN. 25,000 applications.

Mr. COURTNEY. 25,000. At $100 a piece?

Secretary MCGUIRE. No.

Mr. DUNN. In that neighborhood.

Secretary MCGUIRE. I am sorry, Mr. Courtney. I don't think he has answered the question.

Mr. DUNN. What is the question?

Secretary MCGUIRE. His question was the rate of usage of these things. You don't have that on the board.

Mr. DUNN. I don't think we have that here. We know the number of applications there are for it, but——

Mr. COURTNEY. 25,000 applications, and the question would be how many applications in a year?

Secretary MCGUIRE. We can get that for you. I don't have that, offhand. It is substantial.

Mr. DUNN. It is very substantial.

CHART 38

STANDARDIZATION
OF ENGINE ACCESSORY GENERATORS
1 MILITARY STANDARD GENERATOR (18-AMPERE)
16 STANDARD SERVICE PARTS
+
REPLACES
98 COMMERCIAL GENERATORS (10-TO-25 AMPERE) REQUIRING 880 SERVICE PARTS

This is like the dance of seven veils.

This is a standard charging generator. One standard generator requiring 16 spare parts—these 16 here—replacing 98 generators formerly in our system, formerly required, normally 880 different spare parts to support it.

This is another job similar to the thermostat that was done for us by industry, producible by all the people in the business on the tools they have.

Mr. HARDY. May I ask you this: Now, when you get this special kind of a development, is that an item that can become of commercial value or is it strictly military?

Mr. DUNN. Yes. Many of these things have been introduced into the commercial lines of engine builders. In fact, some of the industrial engines as a whole are standard commercial products now of some of the engine manufacturers—the standard military engine, of which this is an accessory.

Mr. HARDY. I am surprised to find that industry has been able to standardize for the military a generator of this nature with so many fewer parts and haven't got it already in commercial use.

Mr. DUNN. The number of parts has not been reduced. The number of parts required to support a generator has not been reduced.

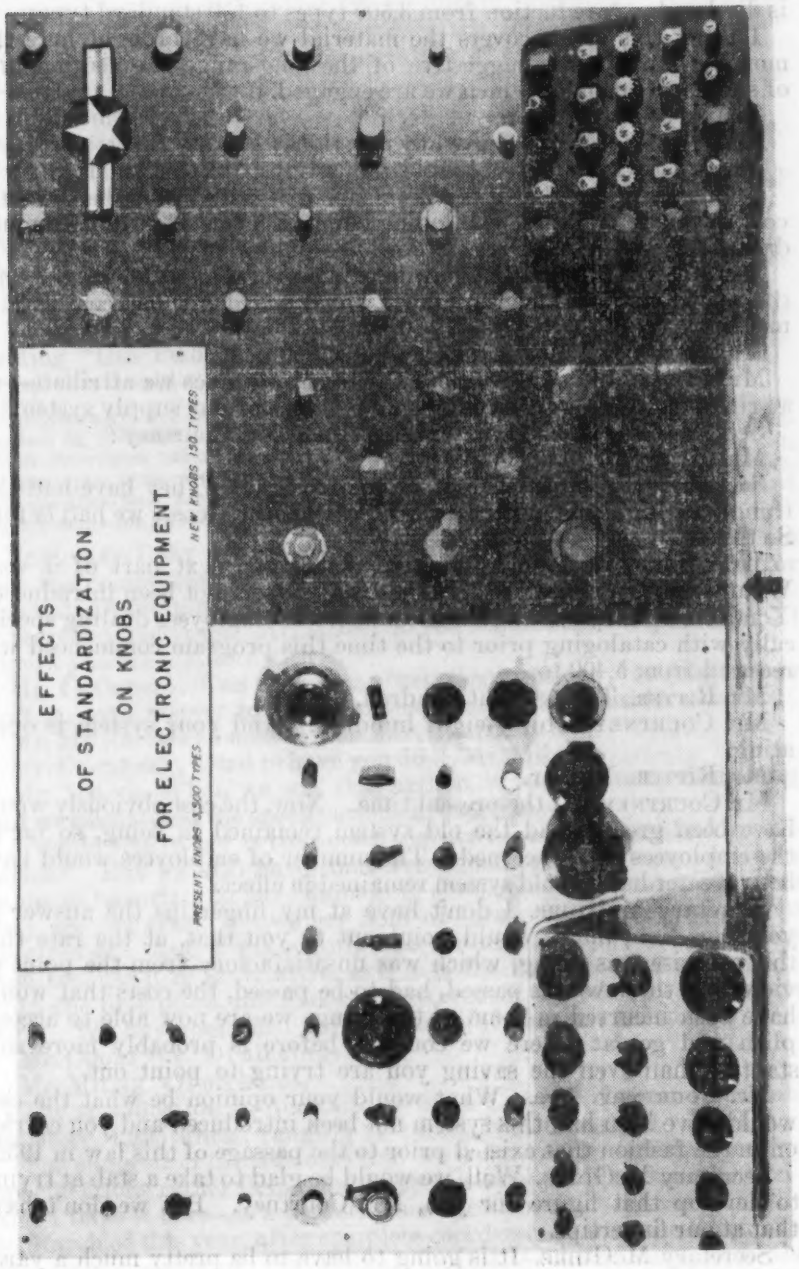
Mr. HARDY. You are just talking about your total number of parts required?

Mr. DUNN. To support 98 types of generators.

Secretary MCGUIRE. To support multiple generators.

Mr. DUNN. Ninety-eight types of generator require 880 different spare parts. One type requires 16. This is a remarkable job, in our view, as that whole program is.

CHART 39


EFFECTS
OF STANDARDIZATION
ON KNOBS
FOR ELECTRONIC EQUIPMENT
PRESENT KNOBS 4,500 TYPES
NEW KNOBS 150 TYPES

Here is another chart suggesting what has been done with respect to electronic knobs. In the small type, the significance of this chart is disclosed. A reduction from 3,500 types to 150 standard types.

I think this about covers the material we have brought here this morning, and this is suggestive of the long-range engineering type of standardization on which we are engaged.

Thank you very much.

Mr. HÉBERT. Did you have any questions?

Mr. COURTNEY. I have a couple of questions, Mr. Chairman.

I don't know whether it is possible to answer it. What has been the cost so far of the single cataloging effort in terms of millions or hundreds of thousands? Does anyone have an opinion?

Mr. RITTER. Yes. Mr. Chairman, the program, as we might term the real Federal cataloging effort, which ended in 1956, cost us $152 million.

Mr. COURTNEY. That is the one that ended in 1956?

Mr. RITTER. Yes. Now, the regular maintenance we attribute—we attribute as part of the regular maintenance of our supply system?

Secretary MCGUIRE. Could I add to that, Mr. Courtney?

Mr. COURTNEY. Yes.

Secretary MCGUIRE. This is what it costs us. They have had this thing on a highlighted process, and some of these costs we had before. So this is not an increase, necessarily.

Mr. COURTNEY. I am coming to that. The next part of it was: What would have been the cost had this system not been introduced? You have already shown that the number of employees dealing specifically with cataloging prior to the time this program commenced was reduced from 5,400 to——

Mr. RITTER. Thirty-eight hundred.

Mr. COURTNEY. Thirty-eight hundred. And your system is operating.

Mr. RITTER. Yes, sir.

Mr. COURTNEY. At the present time. Now, the cost obviously would have been greater had the old system remained in being, so far as the employees are concerned. The number of employees would have been greater had the old system remained in effect.

Secretary MCGUIRE. I don't have at my fingertips the answer to your question, but I would point out to you that, at the rate that this exercise was going, which was unsatisfactory from the point of view that the law was passed, had to be passed, the costs that would have been incurred in some of the things we are now able to accomplish and get at where we couldn't before is probably more substantial than even the saving you are trying to point out.

Mr. COURTNEY. Yes. What would your opinion be what the cost would have been had this system not been introduced and you carried on in the fashion that existed prior to the passage of this law in 1952?

Secretary MCGUIRE. Well, we would be glad to take a stab at trying to develop that figure for you, Mr. Courtney. But we don't have that at our fingertips.

Secretary MCGUIRE. It is going to have to be pretty much a yardstick guess.

Mr. COURTNEY. You wouldn't keep a set of books on it.

Secretary MCGUIRE. No.

Mr. COURTNEY. But you would have an informed guess. And may I suggest also that we consider the savings in inventory. And when I speak of inventory, I mean not only the actual numbers but the warehousing, storage, and transportation of the other items.

Secretary MCGUIRE. Mr. Dunn has some figures on that, as to space saved in some of your areas of warehousing. Mr. Dunn.

Mr. DUNN. Those are contained in our semiannual reports, Mr. McGuire.

Mr. COURTNEY. Yes. They are contained in the semiannual reports.

Mr. DUNN. The committee has them.

Mr. COURTNEY. Yes. I have a specific question and I am not sure who will be able to answer.

A Nation's Business, (October 1958) magazine article, under the heading "Use Performance Standards Instead of Detail Specifications," this is said:

> Fantastically detailed specifications are drawn for even the simplest defense supplies in accordance with the Armed Services Procurement Act. The specification sometimes takes years to prepare. Specifications for a self-locking nut, for example, cover 34 pages. An electric cable takes 103 pages to describe. The specifications for an Army field jacket are detailed in 21 pages. And requirements for an electron tube take 190 pages to list.

Now, may I say a word for the record, Mr. Chairman—and I am sure the committee recognizes this—as a part of the argument for negotiated buying without specifications.

Secretary MCGUIRE. Mr. Milne, do you want to answer part of that? I know you are familiar with it.

Mr. COURTNEY. Can anyone answer the question? Is this true or isn't it, with respect to the item that was under consideration?

Mr. MILNE. May I answer that, Mr. Chairman?

Mr. COURTNEY. Glad to have you do it, Mr. Milne.

Mr. MILNE. When we saw that article, it looked pretty damaging, and we asked to see the specifications in question.

I would like to say at the outset that we have some very bad specifications. But we also have some very good specifications. It seems to me to be unfair to have damaging statements like that made when they are not true. So we got hold of these specifications that were referred to. And I will simply deal with the electron tube specification because it is illustrative, and it is the biggest of them.

In the first place, the Federal Government doesn't buy an electron tube. We buy about $50 million worth of electron tubes.

Mr. COURTNEY. Of all kinds?

Mr. MILNE. Of all kinds.

The specification in question covers all of our electron tubes and resistors, 1,235 kinds, ranging in price from 65 cents to $9,000.

The suggestion is made also that we should have performance type specifications rather than detailed specifications. This specification—and I have it here—is a performance specification. It was published in March of this year, after complete coordination with the Electronics Industry Association, the Aircraft Industries Association, and other associations interested in the transistor and electronics field.

The next point is that while there are 190 pages in the piece of literature, only 114 pages are the true specifications. Seven pages

cover how a manufacturer can get on the qualified products list. It tells him how he submits tubes and how many he has to submit, and how they are tested, and then he gets on the qualified products list.

Nineteen pages of appendix cover visual and mechanical inspection methods. Ten pages cover acceptance procedures, that is, how the inspectors operate, and the lots that they have to inspect, and so forth. Twelve pages cover the gages to be used.

Now, electron tubes have to fit into a socket, a receptacle, and they have to be accurately manufactured or the tube won't fit. And 20 pages are the index of the specifications.

Now, just to touch on the electric cable one which they mention there, it says we have to—I have forgotten how many pages it is—134 pages, I think—to buy an electric cable. It is in the top of that center column, Mr. Courtney.

Mr. COURTNEY. Yes, I have just read it. "An electric cable takes 103 pages to describe." Now, let's break that down and see what it is.

Mr. MILNE. That is true, but it isn't an electric cable but the whole spectrum of electric cables that are purchased by the Department of Defense.

Mr. COURTNEY. How many in number?

Mr. MILNE. Forty-five different types, and 259 different items, ranging in price from $25 a hundred feet, to $650 a hundred feet. And of the 103 pages, most of it is a page to each type of cable, so that if a manufacturer goes to bid on an underwater telephone cable, for example, he doesn't have to read the 103 pages, but he turns to the page that describes that particular cable.

Now, as I said at the outset, we have some terrible specifications, and we are taking steps to do something about it. But I do think it is important that when the services in complete cooperation with industry bring out what I think is the best specification I have ever seen, and I am speaking now about the electron tube——

Mr. HARDY. Is it your point then that the article in Nation's Business is a false or misleading article?

Mr. MILNE. Yes, and we have taken it up with them, Mr. Hardy.

We have here a letter which was not generated by us from one of the electron tube manufacturers who wrote the magazine and protested vehemently at this article because he said it was unfair, that this was a performance type of specification.

He says, "I take exception, however"—this is from a Mr. Byrd F. Arinc Research Corp.

He says:

> I take exception, however, to the erroneous implication that electron tube specifications are voluminous documents devoid of performance standards. It is extremely unfortunate and misleading that they chose an example which is the antithesis of what they are trying to illustrate.
>
> First, the 190-page specification to which the report refers by way of illustration is the basic section of military specifications which applies not to 1 tube, but to about 1,200 tube types in all categories, including receiving tubes, transmitting tubes, rectifiers, thyratrons, klystrons, magnetrons, and cathode ray tubes used by the military.
>
> This one specification covers inspection instructions, test methods and performance standards for these 1,200 types, ranging in price from a few cents to about $9,000 per item.

Mr. CUNNINGHAM. Might I ask a question there?

Mr. MILNE. Yes, sir.

Mr. CUNNINGHAM. When an item appears in a publication of general circulation that is erroneous or untrue, as you stated, have you an idea how much the publication of it eventually costs the taxpayers through unnecessary explanations and investigations? I am pinpointing my question to this. I have often wondered how much these erroneous reports that appear in publications from time to time actually cost the taxpayers in dollars and cents.

Mr. MILNE. I don't know how you could put the finger on the dollars and cents.

Mr. CUNNINGHAM. Would you say it would be substantial?

Mr. MILNE. I would say it would be substantial, and the point we are trying to make is that the writer of that article could have come to our Standardization Division or come to the Department of Defense and asked to see the specifications and found out something about it.

Mr. COURTNEY. Or he could have read the document itself.

Mr. MILNE. Yes.

Mr. CUNNINGHAM. I am thinking, for instance, 14 years ago 1 or 2 articles appeared in publications of national circulation criticizing the treatment of veterans in our hospitals. I happened to be on the committee at that time and was one assigned to go through he hospitals in the United States.

We found the article 99 percent in error, completely untrue. The writer of it had been in only 1 of 96 hospitals throughout the United States and based his article upon 1, a few hours in 1 day—that kind of an investigation. It was extremely critical. It caused a lot of heartaches among the relatives of the boys in the hospitals of the services.

It cost a tremendous amount of money to the taxpayers. A bill was even put through the Congress authorizing the entire Veterans' Committee to go out and make an investigation. The members themselves went through every hospital during the Easter recess, at the very time President Roosevelt died—I remember it that way—in 1945, and it was found to be almost completely erroneous.

I often wondered since that time how much money it has cost, added to the expense of the American taxpayers, by erroneous publications not founded upon fact.

Mr. MILNE. We have another difficulty, Mr. Cunningham, and that is some of these old chestnuts never die.

For example, in debate in the Senate last summer there was the statement that we have a specification on ping-pong balls—18 pages, wasn't it, John?

Mr. DUNN. 18 pages.

Mr. MILNE. Actually, there were only seven pages in the specification, and it was canceled in 1952.

Mr. CUNNINGHAM. That is the point I am making. Since I have been on this committee, I guess since it started under our distinguished chairman, I have noticed so much of our work that we have done here was made necessary simply because of an erroneous statement or statements that appeared in various publications.

Mr. MILNE. That is right.

Mr. CUNNINGHAM. There is so much wasted effort.

Mr. MILNE. That is right.

Mr. CUNNINGHAM. And it is very expensive. I just wonder if we shouldn't start an investigation sometime a little beyond the scope of what the committee is doing.

Mr. MILNE. That is an interesting thought, Mr. Cunningham.

Secretary MCGUIRE. I want to be very clear here, Mr. Chairman, that, while we are discussing this specification, we have some specifications—this is a very detailed field and I am sure we have bad specifications—we know of specifications we are now trying to correct that really don't make sense. They may have made perfect sense when they were developed, or maybe we have a little sharper approach to the thing. We think we are learning. This is a field that there is going to have to be constant review on.

Mr. MILNE. We also find, Mr. Chairman, that sometimes industry specifications aren't too good, too. We have one very bad specification which we are doing something about. Just as a check, we asked the specification people to get a copy of the General Motors specification on it. It was nearly as bad as ours. It was way overspecified.

Mr. COURTNEY. Overspecified?

Mr. MILNE. Overspecified; yes.

Mr. COURTNEY. Well, that is one of the real hazards of specifications, to overspecify, isn't it?

Mr. MILNE. Right.

Secretary MCGUIRE. We think we have a lot of work to do in that field, too, and keep on top of it.

Mr. HÉBERT. Anything else?

Mr. CUNNINGHAM. I would like to ask one more question. When erroneous statements, as you have pointed out like this come out, could you trace the fault of those statements to some failure to give out proper information from the Department, or is it just the fault of an irresponsible reporter?

Secretary MCGUIRE. I think it is hard to answer that in generalities. To my knowledge, in the specific case we are talking about, I don't know that we were ever consulted on this electrical specification.

Mr. MILNE. No.

Secretary MCGUIRE. On the other hand, we have any number of people coming into our operation asking us questions on these things. I would not say that anyone writes this kind of an article on a malicious basis, if that is what you mean. This is a highly technical and controversial area.

Mr. MILNE. In other words, they write it without sufficient information?

Secretary MCGUIRE. I think possibly that is your problem.

Mr. MILNE. Yes.

Secretary MCGUIRE. In this particular article.

Mr. COURTNEY. This is a part of an argument, Mr. Cunningham, criticizing the provisions of the Armed Services Procurement Act, which carries out the traditional and historical American position of advertised competitive bidding. This was apparently selected as an example of the imposition of specifications by this act, of users' requirements.

Mr. HARDY. In substance, wasn't that part of a program trying to put all the procurements on a negotiated basis?

Mr. COURTNEY. Of course.

Mr. CUNNINGHAM. I want to say this: From what I have observed this morning, as I visualize it, I think what has been accomplished as a result of what was started by our chairman and this committee back a good many years ago will eventually result in not millions, but many billions of savings to the taxpayer.

Mr. MILNE. That is correct.

Mr. CUNNINGHAM. Would you say that is correct?

Mr. MILNE. Yes, sir.

Mr. HÈBERT. Anything further? Thank you, Mr. McGuire, and members of your staff.

Secretary MCGUIRE. Thank you, sir.

Mr. HÉBERT. The Chair wishes to say this, that it has been most refreshing in the approach which the committee has received from the Department in this particular area. Up until recent years the general tenor was to defend instead of cooperate. But in recent years, particularly since Mr. McGuire has been in charge, the committee has found an open door at all times and has found an inclination and a definite tendency to correction, if there was an error, and to better the situation.

Certainly I am impressed with the candor and frankness in which you all have discussed this matter this morning in public. We have discussed it privately many times, but the committee does appreciate the efforts of Mr. Milne, and Mr. Dunn, and Mr. Ritter.

Secretary MCGUIRE. Thank you very much, Mr. Chairman.

Mr. HÈBERT. And you, Mr. Secretary. Thank you very, very much.

Secretary MCGUIRE. Thank you.

Mr. HÈBERT. I think if you continue in this vein and approach this most complex problem in the same spirit of cooperation, that we will obtain greater things than have been obtained already. I do appreciate it.

Thank you, Mr. Secretary.

We will recess until 1:30.

(Whereupon, at 11:35 a. m., the subcommittee adjourned.)

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